

## SEQUENCE LISTING

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 Labandera, Marcel

<120> Manipulation of organic acid biosynthesis and secretion

<130> FREE.P-006

<150> 2003901796  
 <151> 2003-04-14

<150> 2004901259  
 <151> 2004-03-10

<150> PCT/AU2004/00493  
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<170> PatentIn version 3.2

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 Ala Glu His Glu Met Asn Cys Ser Thr Ala Ala Val Arg His Leu Ala  
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His Lys Ser Lys Phe Trp Glu Pro Thr Tyr Glu Asp Ser Leu Asn Leu
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Ile Ala Arg Leu Pro Gln Val Ala Ser Tyr Val Tyr Arg Arg Ile Phe
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Lys Asp Gly Lys Thr Ile Ala Ala Asp Asn Thr Leu Asp Tyr Ala Ala
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 ggcctaattgt tgatgctcac agnggagttt tgctcaacca cttcggatta gttgaacacg 780  
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acgtaataca gatccacgat actcgtgcc aagggagttt gcactgaagt atttaccgga 180  
agaccactt ttccaactgg tctccaagtt gtacgaagtt gtgcctccta tcctcaccga 240  
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ccacttcgga ttagttgaag cacggtacta cactgtcttg ttcggcgtct caaggagcat 360  
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gagtgtcacc atggagtggc tggaaaacca ctgcaagaag gctgcggcct gaagctacac 480  
caatgcttcg ttttacaat caggccgtct ttgatgttaa taatgactga gcataagtta 540  
ggcatggtta gccttgtttt accatcttcg ttttcctggc caataactgg agcaagaggc 600  
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 ctggtctcca agttgtacga agttgtgcct cctatcctca ccgagttagg caaggtaaaa 180  
 aacccatggc ctaatgttga tgctcacagt ggagttttgc tcaaccactt cggattagtt 240  
 gaagcacggt actacactgt cttgttcggc gtctcaagga gcatgggaat tggatctcag 300  
 ctcatTTggg accgtgccct cggcctgcc cttgaaagac cgaagagtgt caccatggag 360  
 tggctgga aa accactgcaa gaaggctgcg gcctgaagct acaccaatgc ttngttttac 420  
 aaatcangcc gtctttgatg ttaataatga ctgagcataa gttaggcatg ggtagccttg 480  
 ttttaccatn ttcgTTTTcc tggccaataa ctggagcaag aggctcacag acggtagaat 540  
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 aatgcttcgt ttacaaatc aggccgtctt tgatgttaat aatgactgag cataagttag 180  
 gcatggttag ccttgtttta ccattctcgt tttcctggcc aataactgga gcaagaggct 240  
 cacagacggt agaattttgt aaccaccgtt acttgaacac cgaatcagtt aaatgtcatt 300  
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 caacggccat agcaacggca ccaacggcgc caatggctcc aaggaaggct tcacaggcgt 180  
 cacgaccaga cagaaccctc accctacaca caagagccca tatgcacctg ttggcgactt 240

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tttgtcaaat gtcggccgct tcaagattat cgagagcaca ttaagagagg gcgagcaatt 300
cgccaacgcc tacttcgacc ttgaggctaa aatcaagatc gccagagctc tcgacaactt 360
tggtgttgac tacattgaag ttaccagccc tgctgcctct gagcagtcaa gaagggactg 420
cgaagccctc tgcaagctcg gattgaaagc caagatcctt acccacgtac gatgccacat 480
ggacgatgcc agaatcgctg tcgagactgg tgttgacggc ctcgatgtcg tcattggaac 540
ctctgcgtac ctccgcgagc acagccatgg caaggacatg acatacatca aaaacacagc 600
gctggagggtg attgagtttg tcaagagcaa gggan 635

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<210> 18
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<400> 18

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Asn Pro Pro Thr Phe Leu Phe Pro Pro Gln Pro Pro Asn Met Cys Pro
20          25          30

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Pro Thr Glu Xaa Thr Pro Ala Thr Asn Gly His Ser Asn Gly Thr Asn
35          40          45

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Gly Ala Asn Gly Ser Lys Glu Gly Phe Thr Gly Val Thr Thr Arg Gln
50          55          60

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Asn Pro His Pro Thr His Lys Ser Pro Tyr Ala Pro Val Gly Asp Phe  
 65 70 75 80  
 Leu Ser Asn Val Gly Arg Phe Lys Ile Ile Glu Ser Thr Leu Arg Glu  
 85 90 95  
 Gly Glu Gln Phe Ala Asn Ala Tyr Phe Asp Leu Glu Ala Lys Ile Lys  
 100 105 110  
 Ile Ala Arg Ala Leu Asp Asn Phe Gly Val Asp Tyr Ile Glu Val Thr  
 115 120 125  
 Ser Pro Ala Ala Ser Glu Gln Ser Arg Arg Asp Cys Glu Ala Leu Cys  
 130 135 140  
 Lys Leu Gly Leu Lys Ala Lys Ile Leu Thr His Val Arg Cys His Met  
 145 150 155 160  
 Asp Asp Ala Arg Ile Ala Val Glu Thr Gly Val Asp Gly Leu Asp Val  
 165 170 175  
 Val Ile Gly Thr Ser Ala Tyr Leu Arg Glu His Ser His Gly Lys Asp  
 180 185 190  
 Met Thr Tyr Ile Lys Asn Thr Ala Leu Glu Val Ile Glu Phe Val Lys  
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 Ser Lys Gly  
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agtcgttccc ggttacggac acgccgttct ccgcaagacc gacccccgct acgtctccca 180  
gcgcgagttc gcccagaagc accttcccga cgaccaatg ttcaagctcg tcagtcaggt 240  
ctacaagatc gcccctggtg ttctcaccga gcacggcaag accaagaacc cctaccccaa 300  
cgtcgacgcc cactccggtg tcctcctcca gtactacggc ctactgagc agaactacta 360  
caccgttctc ttcggtgtat cccgtgcgct cggtgtcctt cccagctta tcattgaccg 420  
tgccgtcggg gccccattg agaggcccaa gtctttcagc actgaggctt acgccaagtt 480

ggttggtgct aagttgtaag cgcgttactg caacgtgctc tacagccagg agaatgtgga 540  
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Xaa Ala Ile Gly Asn Asp Leu Ser Asp Gln Ala Ile Lys Asp Tyr Leu  
 20 25 30

Trp Ser Thr Leu Lys Ala Gly Gln Val Val Pro Gly Tyr Gly His Ala  
 35 40 45

Val Leu Arg Lys Thr Asp Pro Arg Tyr Val Ser Gln Arg Glu Phe Ala  
 50 55 60

Gln Lys His Leu Pro Asp Asp Pro Met Phe Lys Leu Val Ser Gln Val  
 65 70 75 80

Tyr Lys Ile Ala Pro Gly Val Leu Thr Glu His Gly Lys Thr Lys Asn  
 85 90 95

Pro Tyr Pro Asn Val Asp Ala His Ser Gly Val Leu Leu Gln Tyr Tyr  
100 105 110

Gly Leu Thr Glu Gln Asn Tyr Tyr Thr Val Leu Phe Gly Val Ser Arg  
115 120 125

Ala Leu Gly Val Leu Pro Gln Leu Ile Ile Asp Arg Ala Val Gly Ala  
130 135 140

Pro Ile Glu Arg Pro Lys Ser Phe Ser Thr Glu Ala Tyr Ala Lys Leu  
145 150 155 160

Val Gly Ala Lys Leu  
165

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ttttggtgat gcatgcttga agggctctgaa cggagttcct gacattgttg aatgctccta 240  
cgtgcaatca actatcacag aactgccatt ctttgcctcc aagggtgaggc tcgggaagaa 300  
tggagtcgag gaagtgcttg gtttgggtga gctgtcggcc tttgagaagg aaggtttgga 360  
aagtctcaag ggtgagctca agtcttcaat tgacaagggc atcgcgttcg ccaatgcgag 420  
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<400> 22



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20 25 30

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35 40 45

Ser Ala Thr Leu Ser Met Ala Tyr Ala Gly Ala Val Phe Gly Asp Ala  
50 55 60

Cys Leu Lys Gly Leu Asn Gly Val Pro Asp Ile Val Glu Cys Ser Tyr  
65 70 75 80

Val Gln Ser Thr Ile Thr Glu Leu Pro Phe Phe Ala Ser Lys Val Arg  
85 90 95

Leu Gly Lys Asn Gly Val Glu Glu Val Leu Gly Leu Gly Glu Leu Ser  
100 105 110

Ala Phe Glu Lys Glu Gly Leu Glu Ser Leu Lys Gly Glu Leu Lys Ser  
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Ser Ile Asp Lys Gly Ile Ala Phe Ala Asn Ala Ser  
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cgtgcaatca actatcacag aactgccatt ctttgcctcc aaggtgaggc tcgggaagaa 300  
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aagtctcaag ggtgagctca agtcttcaat tgacaagggc atcgcgttcg ccaatgcgag 420  
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cagtgcctttt tctgcccatac acgtgggcat ggaagatttg agcttcacaa taaaaatccg	540
gcggcgtaat gccacagaac attacttgta caagaggga ctagttcgtg tcaagttttg	600
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agtctcaagg gtgagctcaa gtcttcaatt gacaaggga tcgcgttcgc caatgcgagt	420
taattaattt tgcagattat agcaaaccag gtctagttaa ggggtctggt gtttttgttc	480
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<210> 25  
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agtctcaagg gtgagctcaa gtcttcaatt gacaaggga tcgcgttcgc caatgcgagt	420
taattaattt tgcagattat agcaaaccag gtctagttaa ggggtctggt gtttttgttc	480
agtgcctttt ctgcccatac cgtgggcatg gaagatttga gcttcacaat aaaaatccgg	540
cggcgtaatg ccacagaaca ttacttgtag aagagggaac tagttcgtgt caagttttga	600
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<223> n is a, c, g, or t

<400> 26

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gaggcaaagg ctggaaaggg atctgcaacc ttgtccatgg cgtatgctgg cgcagttttt	180
ggtgatgcat gcttgaaggg tctgaacgga gttcctgaca ttgttgaatg ctctacgtg	240
caatcaacta tcacagaact gccattcttt gcctccaagg tgaggctcgg gaagaatgga	300
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cgnn	544

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attgttgaat gctcctatgt gcaatcaact atcacagaac tgccattctt tgcctccaag 180  
gtgaggctcg ggaagaatgg agtcgaggaa gtgcttggtt tgggtgagct gtcggccttt 240  
ganaaggaag gtttggaag tctcaagggt gagctcaagt cttcaattga caagggcattc 300  
gcgttcgcca atgcgagttg attaaatttg cagattatag caatccaggt ctagttgagg 360  
ggctctgtttt tgactttttg ttcagngctt tttctgcccc tcacgtgggc atggaagatt 420  
tgagcttcac aataaaaatc cggcggcgta atgccacana acattacttg gacaagaggg 480  
aactagttcg ggtnaagttt tgaactggn aattaaaca ccaattgttg tgcccctttg 540  
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gcgttcgcca atgcgagttg attaaatttg cagattatag caatccaggt ctagttgagg 180  
ggtctgtttt tgactttttg ttcagtgtt tttctgcca tcacgtgggc atggaagatt 240  
tgagcttcac aataaaaatc cggcggcgta atgccacaga acattacttg tacaagaggg 300  
aactagttcg tgtcaagttt tgaactggta cattaacga acaattgttg atgcactttg 360  
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agttgattaa atttgcagat tatagcaatc caggtctagt tgaggggtct gtttttgact 180  
ttttgttcag tgctttttct gcccatcacg tgggcatgga agatttgagc ttcacaataa 240  
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 tggtggccat gctggtgtta ctatcctgcc acagttctca caggctactc ctgcaagtaa 180  
 tgcattgtcc catgaggacc ttaaggccct caccaagagg acacaagatg gtgggacgga 240  
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 ctttgtgcaa tcaaccgtaa cagagctgcc attctttgcc tccaaggtaa ggctcggcaa 420  
 gaacggagtg gaggaagtga ttgggctggg cgagctgtct gccttcgaga aggagggctc 480  
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 gagctagtca acctgctcag attctaacac tccgcacatg aactcggtgg gatctgatga 600  
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 cacaataaaa tggcgtgnct tgttgccata ctgaactgaa cttgtaatac cagaaagagt 720  
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20 25 30

Thr Gly Val Asn Val Pro Val Val Gly Gly His Ala Gly Val Thr Ile  
35 40 45

Leu Pro Gln Phe Ser Gln Ala Thr Pro Ala Ser Asn Ala Leu Ser His  
50 55 60

Glu Asp Leu Lys Ala Leu Thr Lys Arg Thr Gln Asp Gly Gly Thr Glu  
65 70 75 80

Val Val Glu Ala Lys Ala Gly Lys Gly Ser Ala Thr Leu Ser Met Ala  
85 90 95

Tyr Ala Gly Ala Val Phe Gly Asp Ala Cys Leu Lys Gly Leu Asn Gly  
100 105 110

Val Pro Asp Ile Val Glu Cys Ser Phe Val Gln Ser Thr Val Thr Glu  
115 120 125

Leu Pro Phe Phe Ala Ser Lys Val Arg Leu Gly Lys Asn Gly Val Glu  
130 135 140

Glu Val Ile Gly Leu Gly Glu Leu Ser Ala Phe Glu Lys Glu Gly Leu  
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Glu Ser Leu Lys Gly Glu Leu Xaa Xaa Ser Ile Glu Lys Gly Ile Lys  
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ggtggccatg ctggtgttac tatcctgcc a ctgttctcac aggctactcc tgcaagtaat 180  
gcattgtccc atgaggatct taaggccctc accaagagga cacaagatgg tgggacggaa 240  
gttggtgaag caaaggctgg aaagggctca gcaacattgt caatggcata tgctggtgca 300

gtatttgag atgcatgctt gaaggggctc aatggagttc ctgacattgt agagtgctcc	360
tttgtgcaat caactgtaac agagctgccca ttctttgcct ccaaggtaag gctcggcaag	420
aacggagtg aggaagtgat tgggctgggc gagctgtctg ccttcgagaa ggaggggtctg	480
gagagcctca agggcgagct gntgncctcc atcgagaagg gtatcaagtt cgcgaggag	540
agctagtcaa cctgctcaga ttctgacact ccgtacatga actcggggg atctgatgaa	600
tttttggtac gactcctttc tctgcccctt tttcgtgggg acattgaggc gttgngcttc	660
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ttactatcct gccacagttc tcacaggcta ctctgcaag taatgcattg tcccatgagg	180
accttaaggc cctcaccaag aggacacaag atgggtgggac ggaagttggt gaagcaaagg	240
ctggaaaggg ctgagcaaca ttgtcgatgg catatgctgg tgcagttttt ggagatgcat	300
gcttgaaggg gctcaatgga gttcctgaca ttgtagagtg ctcttttggt caatcaaccg	360
taacagagct gccattcttt gcctccaagg taaggctcgg caagaacgga gtggaggaag	420
tgattgggct gggcgagctg tctgccttcg agaaggaggg tctggagagc ctcaaggcg	480
agctgttgct ctccattgag aagggtatca agttcgctca ggagagctag tcaacctgct	540
cagattctaa cactccgcac atgaactcgg tgggatctga tgaatttttg gttcgactcc	600
tttactgcc cccttctcct ggggacattg aggcgtcgtg ctccacaata aaatggcggtg	660
tcttggtgcc atactgaact gaacttgtaa taccagaaag agtgaaaccc tgtgccttat	720
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 gttaatcctc cctgctcatt caccatgagg aaattagtagt ctcaccttca cagcatacag 180  
 aatggtggga cagaagtngt cgaggcgaaa gctggagcag gatcggnnac tntttctatg 240  
 gcgnatgcgg cagctaaatt tgcagatgct tgctngagag gattgcatgg tgatgctggg 300  
 atagnggant gctcttatgt ggattctcag gtgacgganc tntctttntt tgcattccaaa 360  
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 20 25 30

Xaa Ile Leu Pro Leu Leu Ser Gln Val Asn Pro Pro Cys Ser Phe Thr  
 35 40 45

Met Arg Lys Leu Val Ser His Leu His Ser Ile Gln Asn Gly Gly Thr  
 50 55 60

Glu Xaa Val Glu Ala Lys Ala Gly Ala Gly Ser Xaa Thr Xaa Ser Met  
 65 70 75 80

Ala Xaa Ala Ala Ala Lys Phe Ala Asp Ala Cys Xaa Arg Gly Leu His  
 85 90 95

Gly Asp Ala Gly Ile Xaa Xaa Cys Ser Tyr Val Asp Ser Gln Val Thr  
 100 105 110

Xaa Xaa Ser Xaa Phe Ala Ser Lys Val Arg Leu Gly Cys Ser Gly Val  
 115 120 125

Xaa Glu Ile Leu Pro Leu Gly Pro Leu Asn Glu  
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 gccgcgcagc tcctccgccg ccgcagctac tcgtccgcgt ccggccagcc ggagcggaag 180  
 gtggccatcc tcggcgcggc cggcgggatc gggcagccgc tggcgctcct catgaagctg 240  
 aaccgcgtcg tctctccct ctccctctac gacatcgccg ccacccccgg cgtcgccgcc 300  
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 gccatcgcca agtactgccc caacgctctt atcaacatga tcagcaaccc tgtgaactca 540  
 actgttccaa ttgctgctga agttttcaag aaggctggaa cctatgatga gaagaagttg 600  
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Phe Arg Leu His Arg Ser Arg Ser His Thr Pro Pro Gln Pro Ala Thr  
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Met Arg Pro Ser Ala Met Arg Ser Ala Ala Gln Leu Leu Arg Arg Arg  
 35 40 45

Ser Tyr Ser Ser Ala Ser Gly Gln Pro Glu Arg Lys Val Ala Ile Leu  
 50 55 60

Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ala Leu Leu Met Lys Leu  
65 70 75 80

Asn Pro Leu Val Ser Ser Leu Ser Leu Tyr Asp Ile Ala Ala Thr Pro  
85 90 95

Gly Val Ala Ala Asp Val Ser His Ile Asn Ser Pro Ala Leu Val Lys  
100 105 110

Gly Phe Met Gly Asp Asp Gln Leu Ala Glu Ala Leu Glu Gly Ala Asp  
115 120 125

Leu Val Ile Ile Pro Ala Gly Val Pro Arg Lys Pro Gly Met Thr Arg  
130 135 140

Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys Asn Leu Cys Thr  
145 150 155 160

Ala Ile Ala Lys Tyr Cys Pro Asn Ala Leu Ile Asn Met Ile Ser Asn  
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Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Phe Lys Lys Ala  
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Gly Thr Tyr Asp Glu Lys Lys Leu Phe Gly Val Thr Thr Leu Asp Val  
195 200 205

Val Arg Ala Arg Thr Phe Tyr Ala Gly Lys Ala Asn Val Pro Val Thr  
210 215 220

Gly Val Asn Val Pro Val Val Gly Gly His Ala Gly Ile Thr Ile Leu  
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Asp Xaa

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<223> n is a, c, g, or t

<400> 38

tccgtacnat tgctgctgaa gtattttaaaa aagctgggac atacaatcct aagagattgt 60

tgggggtgac aacacttgat gtagtgagag ccaatacttt tgtgggtgag gttcttggac 120

ttgaccccag agatgtcaat gttcctgttg ttggcgggca tgccggagtt acgatattac 180

cactcctttc gcaggttagt cctccctgct cgttcacccc tgaggaaatt agttatctca 240

cctcacgcat acagaatggt gggacagaag ttgtggaggc gaaagcagga gcaggatcgg 300

caactctttc tatggcgtat gcggcagcta aatttgcaga tgcttgcttg agaggattgc 360

atggtgatgc tgggatagtg gagtgctctt atgtggattc tcaggtgacc ggaactgcct 420

tctttgcatc caaagttcgc ctaggtcggt ctggcgtcga ggagatcttg caacttgggt 480

ccactgaacc aggttttgaa agantggac tggaanaagg cgaaanaang agctatcccg 540

agagccttcc agaaaggntg tgtcatttcg tncaacaaag tgagttacat gccatcatct 600

ttgttggatg tgcttcccca aagttccaac acaccgtcgn aattggcata tanatattgc 660

tggtttgggg ctttttgcnt tnatgcaaac aggctacctt ntgggtgggg ggggtccggt 720

ntgaaaaact cttaacattt ttttttacgg ttggnaacaa aatntntgaa aagcctgaga 780

<210> 39  
 <211> 271  
 <212> PRT  
 <213> Lolium perenne

<220>  
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 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <223> Xaa can be any naturally occurring amino acid

<220>  
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<220>  
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 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <223> Xaa can be any naturally occurring amino acid

<220>  
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<220>  
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 <223> Xaa can be any naturally occurring amino acid

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<220>  
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 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <223> Xaa can be any naturally occurring amino acid

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 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <222> (266)..(266)  
 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <222> (268)..(269)  
 <223> Xaa can be any naturally occurring amino acid

<400> 39

Arg Xaa Ile Ala Ala Glu Val Phe Lys Lys Ala Gly Thr Tyr Asn Pro  
 1 5 10 15

Lys Arg Leu Leu Gly Val Thr Thr Leu Asp Val Val Arg Ala Asn Thr  
 20 25 30

Phe Val Gly Glu Val Leu Gly Leu Asp Pro Arg Asp Val Asn Val Pro  
 35 40 45

Val Val Gly Gly His Ala Gly Val Thr Ile Leu Pro Leu Leu Ser Gln  
 50 55 60

Val Ser Pro Pro Cys Ser Phe Thr Pro Glu Glu Ile Ser Tyr Leu Thr  
 65 70 75 80

Ser Arg Ile Gln Asn Gly Gly Thr Glu Val Val Glu Ala Lys Ala Gly  
 85 90 95

Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala Ala Ala Lys Phe Ala  
 100 105 110

Asp Ala Cys Leu Arg Gly Leu His Gly Asp Ala Gly Ile Val Glu Cys  
 115 120 125

Ser Tyr Val Asp Ser Gln Val Thr Gly Thr Ala Phe Phe Ala Ser Lys  
 130 135 140  
 Val Arg Leu Gly Arg Ser Gly Val Glu Glu Ile Leu Gln Leu Gly Ser  
 145 150 155 160  
 Thr Glu Pro Gly Phe Glu Arg Xaa Gly Leu Glu Xaa Gly Glu Xaa Xaa  
 165 170 175  
 Ser Tyr Pro Glu Ser Leu Pro Glu Arg Xaa Cys His Phe Xaa Gln Gln  
 180 185 190  
 Ser Glu Leu His Ala Ile Ile Phe Val Gly Cys Ala Ser Pro Lys Phe  
 195 200 205  
 Gln His Thr Val Xaa Ile Gly Ile Xaa Ile Leu Leu Val Trp Gly Leu  
 210 215 220  
 Leu Xaa Xaa Cys Lys Gln Ala Thr Xaa Trp Val Gly Gly Val Arg Xaa  
 225 230 235 240  
 Glu Lys Leu Leu Thr Phe Phe Phe Thr Val Xaa Asn Lys Xaa Xaa Glu  
 245 250 255  
 Lys Pro Glu Xaa Tyr Met Ile Xaa Glu Xaa Ser Xaa Xaa Lys Lys  
 260 265 270

<210> 40  
 <211> 798  
 <212> DNA  
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<220>  
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<220>  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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<220>  
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>  
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>  
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<222> (633)..(633)  
<223> n is a, c, g, or t

<400> 40  
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aagagctgtc ctaatgcaat agtgaatttg atcagcaacc ctgtgaactc aactgtcccc 120  
attgcggcag aagntttcaa gagggctgga acttactgcc ccaaactgtc ccttggaagtg 180  
acaactcttg atgtagcgag ggctaacacc tttgtggctg aagtgccttg agntgatcct 240  
agagaagnca gtgttccgn tgttggcggg catgcaggga tcactatatt gcccctcctg 300  
ncccagggtca gccccccgtg ctcattcact ccagatgaaa tcagctatatt gactaaccgc 360  
atacagaatg gcggtaccga agttgttgag gcaaaggctg gagcaggctc tgcaactttg 420  
tcaatggctt ttgctgctgc aaaattcgcc gatgcatgct tgcgtggaat gcgtggtgat 480  
gctggcattg tggaatgtnc atacgttgca tctgaggtga cagagctgcc gttctttgca 540  
acaaaagtga ggtaggtcg tggcggagct gaggagatcc tccctcttg gccactgaat 600  
gactttgaga gagctggcct ggagaaggcg aanaaggagc tcagcgagag catccagaag 660  
ggtgtggcgt tcatgaacaa gtgagatcat atgaatggat ggataccccg caacctatac 720  
atagatgatg caaagactaa agaaagagtg tgatatagt ctcctatata cctgtaaaat 780  
ctctcctgcc tgtaagaa 798

<210> 41  
<211> 220  
<212> PRT  
<213> Lolium perenne

<220>  
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<222> (38)..(38)  
<223> Xaa can be any naturally occurring amino acid

<220>  
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 <222> (71)..(71)  
 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <222> (76)..(76)  
 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <222> (80)..(80)  
 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <222> (204)..(204)  
 <223> Xaa can be any naturally occurring amino acid

<400> 41

Met Leu Gly Ile Val Arg Ser Ile Cys Glu Gly Val Ala Lys Ser Cys  
 1 5 10 15

Pro Asn Ala Ile Val Asn Leu Ile Ser Asn Pro Val Asn Ser Thr Val  
 20 25 30

Pro Ile Ala Ala Glu Xaa Phe Lys Arg Ala Gly Thr Tyr Cys Pro Lys  
 35 40 45

Arg Leu Leu Gly Val Thr Thr Leu Asp Val Ala Arg Ala Asn Thr Phe  
 50 55 60

Val Ala Glu Val Leu Gly Xaa Asp Pro Arg Glu Xaa Ser Val Pro Xaa  
 65 70 75 80

Val Gly Gly His Ala Gly Ile Thr Ile Leu Pro Leu Leu Xaa Gln Val  
 85 90 95

Ser Pro Pro Cys Ser Phe Thr Pro Asp Glu Ile Ser Tyr Leu Thr Asn  
 100 105 110

Arg Ile Gln Asn Gly Gly Thr Glu Val Val Glu Ala Lys Ala Gly Ala  
 115 120 125

Gly Ser Ala Thr Leu Ser Met Ala Phe Ala Ala Ala Lys Phe Ala Asp  
 130 135 140

Ala Cys Leu Arg Gly Met Arg Gly Asp Ala Gly Ile Val Glu Cys Xaa  
 145 150 155 160

Tyr Val Ala Ser Glu Val Thr Glu Leu Pro Phe Phe Ala Thr Lys Val  
 165 170 175

Arg Leu Gly Arg Gly Gly Ala Glu Glu Ile Leu Pro Leu Gly Pro Leu  
 180 185 190

Asn Asp Phe Glu Arg Ala Gly Leu Glu Lys Ala Xaa Lys Glu Leu Ser  
 195 200 205

Glu Ser Ile Gln Lys Gly Val Ala Phe Met Asn Lys  
 210 215 220

<210> 42  
 <211> 798  
 <212> DNA  
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<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t



<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>  
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 <222> (633)..(633)  
 <223> n is a, c, g, or t

<400> 42  
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 aagagctgtc ctaatgcaat agtgaatttg atcagcaacc ctgtgaactc aactgtcccc 120  
 attgcggcan aagntttcaa gagggctgga acttactgcc ccaaactgtct ccttgagtg 180  
 acaactcttg atgtagcgag ggctaacacc tttgtggctg aagtgcctgn agntgatcct 240  
 agagaagnca gtgttccggn tgttggcggg catgcnggga tcactatatt gccctcctg 300  
 ncccagggtca gcccccgctg ctcatcact ccagatgaaa tcagctatct gactaaccgc 360  
 atacagaatg gcggtaccga agttgttgag gcaaaggctg gagcaggctc tgcaactttg 420  
 tcaatggctt ttgctgctgc aaaattcgcc gatgcatgct tgcgtggaat gcgtggtgat 480  
 gctggcattg tggaatgttc atacgttgca tctgaggtga cagagctgcc gttctttgca 540  
 acaaaagtga ggtaggtcg tggcggagct gaggagatcc tccctcttg gccactgaat 600  
 gactttgaga gagctggcct ggagaaggcg aanaaggagc tcagcgagag catccagaag 660  
 ggtgtggcgt tcatgaacaa gtgagatcat atgaatggat ggataccccg caacctatac 720  
 atagatgatg caaagactaa agaaagagtg tgatatagtg ctctatatata cctgtaaaat 780  
 ctctcctgcc tgtaagaa 798

<210> 43  
 <211> 497  
 <212> DNA  
 <213> Lolium perenne

<220>  
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<222> (484)..(484)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (497)..(497)  
<223> n is a, c, g, or t

<400> 43  
ggatgattta ttcaacaaaa atgctgggat tgtccgatca atctgtgagg gcgttgccaa 60  
gagctgtcct aatgcaatag tgaatttgat cagcaaccct gtgaactcaa ctgtcccat 120  
tgcggcagaa gttttcaaga gggctggaac ttactgcccc aaacgtctcc ttggagtgc 180  
aactcttgat gtagcgagg gtaacacctt tgtggctgaa gtgcttgagg ttgatcctag 240  
agaagtcagt gttccggttg ttggcgggca tgcagggatc actatattgc ccctcctgtc 300  
ccaggtcagc ccccgctgct cattcactcc agatgaaatc agctatttga ctaaccgcat 360  
acagaatggc ggtaccgaag ttgttgaggc aaaggctgga gcaggctctg caactttgtc 420  
aatggctttt gctgctgcaa aattcgccga tgcattgctt cgtggaatgc gtggtgatgc 480  
tgggattgtg gaatgtn 497

<210> 44  
<211> 667  
<212> DNA  
<213> Lolium perenne

<220>  
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<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (658)..(658)  
<223> n is a, c, g, or t

<400> 44  
caattgcacg ttcttctca cttcagcatc accctcacgc ttctcctaca caaccctcc 60  
caaccgtcac tatggtcaag gctgtcgtcg cagggtgctgc tgggtggtatc ggccagcccc 120  
tctctcttct actcaagacg agccccctca tcgatgagct tgccctctac gatgttgta 180  
acactcccgg tgttgccgct gatctttccc acatctcatc ccgcgctcaa atcgccggct 240  
acctcccaa ggatgatggc gcaaaggctg cattcaaaga tgccgacatt atcgctcatc 300  
ccgccggcat tcctcgcaag cctggcatga cccgtgatga cctcttcaac atcaacgccg 360  
gaattgtcaa gggctctgatt gaggttgccg ccgaagttgc cccaaggcc ttatttctgg 420  
tcattctcaa ccctgtcaac tctaccgtcc ctatctctgc cgaggctctc aaggccaagg 480  
gcgtcttcaa ccctcagcgt cttttcggtg tcaccacctc cgacatcgtc cgtgccgaga 540  
ctttcgtcgc cagcatcacc ggcgagaagc agccccagaa cttgaccgtc cccgtcattg 600

gcggccactc cggcgagacc atcgtcccgc ttttcagcaa ggntcagccc tctgcttnca 660  
 ttcccg 667

<210> 45  
 <211> 221  
 <212> PRT  
 <213> Lolium perenne

<220>  
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 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <222> (219)..(219)  
 <223> Xaa can be any naturally occurring amino acid

<400> 45

Ile Ala Arg Ser Cys Ser Leu Gln His His Pro His Ala Ser Pro Thr  
 1 5 10 15

Gln Pro Leu Pro Thr Val Thr Met Val Lys Ala Val Val Ala Gly Ala  
 20 25 30

Ala Gly Gly Ile Gly Gln Pro Leu Ser Leu Leu Leu Lys Thr Ser Pro  
 35 40 45

Leu Ile Asp Glu Leu Ala Leu Tyr Asp Val Val Asn Thr Pro Gly Val  
 50 55 60

Ala Ala Asp Leu Ser His Ile Ser Ser Arg Ala Gln Ile Ala Gly Tyr  
 65 70 75 80

Leu Pro Lys Asp Asp Gly Ala Lys Ala Ala Phe Lys Asp Ala Asp Ile  
 85 90 95

Ile Val Ile Pro Ala Gly Ile Pro Arg Lys Pro Gly Met Thr Arg Asp  
 100 105 110

Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys Gly Leu Ile Glu Val  
 115 120 125

Ala Ala Glu Val Ala Pro Lys Ala Phe Ile Leu Val Ile Ser Asn Pro  
 130 135 140

Val Asn Ser Thr Val Pro Ile Ser Ala Glu Val Leu Lys Ala Lys Gly  
 145 150 155 160

Val Phe Asn Pro Gln Arg Leu Phe Gly Val Thr Thr Leu Asp Ile Val  
165 170 175

Arg Ala Glu Thr Phe Val Ala Ser Ile Thr Gly Glu Lys Gln Pro Gln  
180 185 190

Asn Leu Thr Val Pro Val Ile Gly Gly His Ser Gly Glu Thr Ile Val  
195 200 205

Pro Leu Phe Ser Lys Xaa Gln Pro Ser Ala Xaa Ile Pro  
210 215 220

<210> 46  
<211> 1484  
<212> DNA  
<213> Lolium perenne

<220>  
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<222> (2)..(2)  
<223> n is a, c, g, or t

<400> 46  
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tgtcgtcgcc tcttcccga ccactctccc catccccga ctccagaacc ggctccaatg 120  
gcggcgagg aaccgatgcg cgtgctcgtc accggcgccg caggacaaat tggatatgct 180  
cttgttccga tgattgctag gggaattatg cttggtgcgg accagcctgt tattctgcat 240  
atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga gttggttgat 300  
gccgcatttc cacttctcaa gggagttggt gcaacaactg atgttggtga ggcttgact 360  
ggtgtgaatg ttgcggttat ggttggtgga ttccccagga aggagggaat ggaaaggaag 420  
gatgttatgt ctaagaatgt ttcaatctac aaatctcaag catctgccct tgaagccat 480  
gcagccccga attgcaaggt tctggttggt gccaatccag caaacaccaa tgctcttatt 540  
ttaaaggagt ttgctccatc tattcctgag aagaacatca gttgtttgac ccgcctagac 600  
cataacaggg cacttggtca gatctctgag agacttgatg tccaagttag tgatgtgaag 660  
aatgttatca tctggggcaa tcactcttcc agtcagtacc ctgatgtgaa ccacgccacc 720  
gtgaagactt ccagtggcga gaagcctggt cgcgaacttg ttaaagacga tgaatggcta 780  
aatgcagggt tcattgccac tgtccagcag cgtggtgctg caatcatcaa agcgaggaag 840  
ctctccagtg ctctctctgc tgccagctct gcttgtagacc acatccgtga ttgggttctc 900  
ggaaccctg agggaaacatt tgtttccatg ggtgtgtatt ctgatggttc atacggtgtg 960  
cctgctgggc ttatctactc cttcccagta acttgctgcg gtggtgaatg gacaattggt 1020  
caagggtccc cgatcgacga gttctcaaga aagaagatgg atgccacagc ccaggagctc 1080

tcggaggaga aggcctctgc ctactcgtgc ctcgagtaac tgcataccag ggagcagctg	1140
ccgcctctgat gttttgaata aaaggaacat tttggctcca tgaaactcat ctccactcag	1200
aacagttgca catcgcggtg ccttttagctg gtttttccag tgtgtatgaa tgaggctttt	1260
gtagctctat tttcgctga tgatttacag gacaggatat tggcaggaag attggaacaa	1320
tttgacgtct gattaaaacc aacctcttat tattcctgtg tgtatgaatg aggcttttgt	1380
agctctatatt tcgcctgatg atttacaggc catgatattg gcaggaggat tggaacaatt	1440
tgacgcctga ttaaaaccaa cctcttatta ctaaaaaaaaa aaaa	1484

<210> 47  
 <211> 333  
 <212> PRT  
 <213> Lolium perenne

<400> 47

Met Ala Ala Lys Glu Pro Met Arg Val Leu Val Thr Gly Ala Ala Gly	1	5	10	15
Gln Ile Gly Tyr Ala Leu Val Pro Met Ile Ala Arg Gly Ile Met Leu	20	25	30	
Gly Ala Asp Gln Pro Val Ile Leu His Met Leu Asp Ile Pro Pro Ala	35	40	45	
Ala Glu Ala Leu Asn Gly Val Lys Met Glu Leu Val Asp Ala Ala Phe	50	55	60	
Pro Leu Leu Lys Gly Val Val Ala Thr Thr Asp Val Val Glu Ala Cys	65	70	75	80
Thr Gly Val Asn Val Ala Val Met Val Gly Gly Phe Pro Arg Lys Glu	85	90	95	
Gly Met Glu Arg Lys Asp Val Met Ser Lys Asn Val Ser Ile Tyr Lys	100	105	110	
Ser Gln Ala Ser Ala Leu Glu Ala His Ala Ala Pro Asn Cys Lys Val	115	120	125	
Leu Val Val Ala Asn Pro Ala Asn Thr Asn Ala Leu Ile Leu Lys Glu	130	135	140	
Phe Ala Pro Ser Ile Pro Glu Lys Asn Ile Ser Cys Leu Thr Arg Leu	145	150	155	160
Asp His Asn Arg Ala Leu Gly Gln Ile Ser Glu Arg Leu Asp Val Gln	165	170	175	

Val Ser Asp Val Lys Asn Val Ile Ile Trp Gly Asn His Ser Ser Ser  
 180 185 190  
 Gln Tyr Pro Asp Val Asn His Ala Thr Val Lys Thr Ser Ser Gly Glu  
 195 200 205  
 Lys Pro Val Arg Glu Leu Val Lys Asp Asp Glu Trp Leu Asn Ala Gly  
 210 215 220  
 Phe Ile Ala Thr Val Gln Gln Arg Gly Ala Ala Ile Ile Lys Ala Arg  
 225 230 235 240  
 Lys Leu Ser Ser Ala Leu Ser Ala Ala Ser Ser Ala Cys Asp His Ile  
 245 250 255  
 Arg Asp Trp Val Leu Gly Thr Pro Glu Gly Thr Phe Val Ser Met Gly  
 260 265 270  
 Val Tyr Ser Asp Gly Ser Tyr Gly Val Pro Ala Gly Leu Ile Tyr Ser  
 275 280 285  
 Phe Pro Val Thr Cys Cys Gly Gly Glu Trp Thr Ile Val Gln Gly Leu  
 290 295 300  
 Pro Ile Asp Glu Phe Ser Arg Lys Lys Met Asp Ala Thr Ala Gln Glu  
 305 310 315 320  
 Leu Ser Glu Glu Lys Ala Leu Ala Tyr Ser Cys Leu Glu  
 325 330

<210> 48  
 <211> 770  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <222> (639)..(639)  
 <223> n is a, c, g, or t

<220>  
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 <222> (658)..(658)  
 <223> n is a, c, g, or t

<220>

<221> misc\_feature  
 <222> (687)..(687)  
 <223> n is a, c, g, or t

<400> 48  
 tnacggagct gcttaaatca gccccattc cgctcgtct cactatcctt catcccgttg 60  
 tcgtcgcctc ctcccgaacc actctcccca tccccgaact ccagaaccgg ctccaatggc 120  
 ggcgaaggaa ccgatgcgcg tgctcgtcac cggcgccgca ggacaaattg gatatgctct 180  
 tgttccgatg attgctaggg gaattatgct tggtgcggac cagcctgtta ttctgcatat 240  
 gctggatatt ccaccagctg ctgaagctct taatggtggt aagatggagt tggttgatgc 300  
 cgcatttcca cttctcaagg gagttgttgc aacaactgat gttgttgagg cttgcactgg 360  
 tgtgaatggt gcggttatgg ttggtggatt cccaggaag gagggaatgg aaaggaagga 420  
 tgttatgtct aagaatgttt caatctacaa atctcaagca tctgcccttg aagcccatgc 480  
 agccccgaat tgcaaggttc tggttgttgc caatccagca aacaccaatg ctcttatctt 540  
 aaaggagttt gctccatcta ttcctgagaa gaacatcagt tgtttgaccc gcctagacca 600  
 taacagggca cttggtcaga tctctgagag acttgatgnc caagttagtg atgtgaanaa 660  
 tgttatcatc tggggcaatc actcttncag tcagtaccct gatgtgaacc acgccaccgt 720  
 gaagacttcc agtgccgaga agcctgttcg cgaacttggt aaagacgatg 770

<210> 49  
 <211> 335  
 <212> DNA  
 <213> Lolium perenne

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 <223> n is a, c, g, or t

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 gccgtaggac aaattggata tgctcttggt ccgatgattg ctaggggaat tatgcttggt 180  
 gcggaccagc ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat 240  
 ggtgttaaga tggagttggt tgatgccgna tttncacttt tnaaggaggt tgttgcaaca 300  
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<210> 50  
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<220>  
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 <222> (10)..(10)  
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 <222> (260)..(260)  
 <223> n is a, c, g, or t

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 <222> (267)..(267)  
 <223> n is a, c, g, or t

<220>  
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 <222> (271)..(272)  
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 <222> (277)..(277)  
 <223> n is a, c, g, or t

<220>  
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 <222> (282)..(282)  
 <223> n is a, c, g, or t

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 cgcaggacaa attggatatg ctcttgttcc gatgattgct aggggaatta tgcttggtgc 180  
 ggaccagcct gttattctgc atatgctgga tattgcacca gctgctgaag ctcttaatgg 240  
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<210> 51  
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<212> DNA  
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<220>  
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>  
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<222> (175)..(175)  
<223> n is a, c, g, or t

<220>  
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<222> (194)..(194)  
<223> n is a, c, g, or t

<400> 51  
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tccagaaccg gtc caatgg cggcgaagga accgatgcgc gtgctcgtca ccggcgccgc 120  
aggacaaatt ggat atgctc ttgttccgat gattgctagg cnaattatgc ttgngtgca 180  
ctagcctgtt attntgcata tc 202

<210> 52  
<211> 650  
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<220>  
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 <222> (88)..(88)  
 <223> n is a, c, g, or t

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 ccagaaccgg ctccaatggc ggcgaagnaa cccgatgcgcg tgctcgtcac cggcgccgca 120  
 ggacaaattg gatatgctct tgttccgatg attgctaggg gaattatgct tgggtgtggac 180  
 cagcctgtta ttctgcatat gctggatatt ccaccagctg ctgaagctct taatggtgtt 240  
 aagatggagt tggttgatgc cgcatttcca cttctcaagg gagttgttgc aacaactgat 300  
 gttgttgagg cttgcactgg tgtgaatgtt gcggttatgg ttggtggatt ccccaggaag 360  
 gagggaatgg aaaggaagga tgttatgtct aagaatgttt caatctacaa atctcaagca 420  
 tctgcccttg aagcccatgc agccccgaat tgcaagggtc tggttgttgc caatccagca 480  
 aacaccaatg ctcttatctt aaaggagttt gctccatcta ttcctgagaa gaacatcagt 540  
 tgtttgaccc gcctagacca taacagggca cttggtcaga tctctgagag acttgatgcc 600  
 caagttagtg atgtgaagaa tgttatcatc tggggcaatc actcttccag 650

<210> 53  
 <211> 660  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <222> (5)..(5)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (10)..(10)

<223> n is a, c, g, or t  
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 <222> (37)..(37)  
 <223> n is a, c, g, or t  
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 acaaattgga tatgtctttg ttccgatgat tgctagggga attatgcttg gtgcggacca 180  
 gcctgttatt ctgcatatgc tggatattcc accagctgct gaagctctta atggtgttaa 240  
 gatggagttg gttgatgccg catttccact tctcaaggga gttgttgcaa caactgatgt 300  
 tgttgaggct tgcactggtg tgaatgttgc ggttatggtt ggtggattcc ccaggaagga 360  
 gggaatggaa aggaaggatg ttatgtctaa gaatgtttca atctacaaat ctcaagcatc 420  
 tgcccttgaa gcccatgcag ccccgaattg caaggttctg gttgttgcca atccagcaaa 480  
 caccaatgct cttatcttaa aggagtttgc tccatctatt cctgagaaga acatcagttg 540  
 tttgaccgcg ctagaccata acagggcact tggtcagatc tctgagagac ttgatgtcca 600  
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<210> 54  
 <211> 693  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (24)..(24)  
 <223> n is a, c, g, or t

<220>  
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 <222> (443)..(443)  
 <223> n is a, c, g, or t

<220>  
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 <222> (524)..(524)  
 <223> n is a, c, g, or t

<220>  
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 <222> (533)..(533)  
 <223> n is a, c, g, or t

<220>  
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 <222> (569)..(569)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature

<222> (591)..(591)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (600)..(600)  
<223> n is a, c, g, or t

<220>  
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<223> n is a, c, g, or t

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<221> misc\_feature  
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<223> n is a, c, g, or t

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<222> (675)..(676)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (680)..(680)  
<223> n is a, c, g, or t

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aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac 120  
aaattggata tgctcttggt ccgatgattg ctagggggaat tatgcttggt gcggaccagc 180  
ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga 240  
tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgacgttg 300  
ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg 360  
gaatggaaag gaaggatggt atgtctaaga atgtttcaat ctacaaatct caagcatctg 420  
cccttgaagc ccatgcagcc ccnaattgca aggttctggt tgttgccaat ccagcaaaca 480  
ccaatgctct tatcttaaag gagtttgctc catctattcc tganaagaac atnagttggt 540  
tgacccgcct agaccataac agggcactng gtcagatctc tgagagactt natgtccaan 600  
ttagtgatgt gaanaatggt atcatctggg gtaatcacc ttccagtcaa taccctgatn 660  
tgaaccaccc ccccnnaaan acttccaggg cga 693

<210> 55  
<211> 793  
<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (747)..(747)  
<223> n is a, c, g, or t

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<400> 55
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cagaaccggc tccaatggcg gcgaaggaaac cgatgcgcgt gctcgtcacc ggcgccgcag 120
gacaaattgg atatgctctt gttccgatga ttgctagggg aattatgctt ggtgcggacc 180
agcctgttat tctgcatatg ctggatattc caccagctgc tgaagctctt aatggtgtta 240
agatggagtt ggttgatgcc gcatttccac ttctcaaggg agttgttgca acaactgatg 300
ttgttgaggc ttgcaactgt gtgaatgttg cgtttatggt tgggtgattc cccaggaagg 360
agggaaatgga aaggaaggat gttatgtcta agaatgtttc aatctacaaa tctcaagcat 420
ctgcccttga agcccatgca gccccgaatt gcaaggttct ggttggtgcc aatccagcaa 480
acaccaatgc tcttatctta aaggagtttg ctccatctat tcctgagaag aacatcagtt 540
gtttgaccgc cctagaccat aacagggcac ttggtcagat ctctgagaga cttgatgtcc 600
aagttagtga tgtgaagaat gttatcatct ggggcaatca ctctccagt cagtaccctg 660
atgtgaacca cgccaccgtg aagacttcca gtggcgagaa gcctgttcgc gaacttgta 720
aagacgatga atggctaaat gcagggntca ttgccactgt ccagcagcgt ggtgctgcaa 780
tcatcaaagc gag 793

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<210> 56
<211> 797
<212> DNA
<213> Lolium perenne

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<222> (744)..(744)
<223> n is a, c, g, or t

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<220>
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<223> n is a, c, g, or t

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<220>
<221> misc_feature
<222> (790)..(790)
<223> n is a, c, g, or t

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<400> 56
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cagaaccggc tccaatggcg gcgaaggaaac cgatgcgcgt gctcgtcacc ggcgccgcag 120
gacaaattgg atatgctctt gttccgatga ttgctagggg aattatgctt ggtgcggacc 180
agcctgttat tctgcatatg ctggatattc caccagctgc tgaagctctt aatggtgtta 240
agatggagtt ggttgatgcc gcatttccac ttctcaaggg agttgttgca acaactgatg 300
ttgttgaggc ttgcaactgt gtgaatgttg cgtttatggt tgggtgattc cccaggaagg 360

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agggaaatgga aaggaaggat gttatgtcta agaatgtttc aatctacaaa tctcaagcat	420
ctgcccttga agcccatgca gccccgaatt gcaaggttct ggttggtgcc aatccagcaa	480
acaccaatgc tcttatctta aaggagtttg ctccatctat tcctgagaag aacatcagtt	540
gtttgacccg cctagaccat aacagggcac ttggtcagat ctctgagaga cttgatgtcc	600
aagttagtga tgtgaagaat gttatcatct ggggcaatca ctcttcagc cagtaccctg	660
atgtgaacca cgccaccgtg aagacttcca ggggcgagaa gcctgttcgc gaacttgta	720
aagacgatga atggctaaat gcanggggtca ttgccactgt ccagcagcgt ggngctgcaa	780
tcatcaaagn gaggaac	797

<210> 57  
 <211> 684  
 <212> DNA  
 <213> Lolium perenne

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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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gaaccggctc caatggcggc gaaggaaccg atgcgcgtgc tcgtcaccgg cgccgcagga	120
caaattggat atgctcttgt tccgatgatt gctaggggaa ttatgcttgg tgcggaccag	180
cctgttattc tgcatatgct ggatattcca ccagccgctg aagctcttaa tgggtgtaag	240
atggagttgg ttgatgccgc atttccactt ctcaagggag ttgttgcaac aactgatgtt	300
gttgaggctt gcactggtgt gaatgttgcg gttatggttg gtggattccc caggaaggag	360
ggaatgaaa ggaaggatgt tatgtctaag aatgtttcaa tctacaaatc tcaagcatct	420
gcccttgaag cccatgcagc cccgaattgc aaggttctgg ttgttgccaa tccagcaaac	480
accaatgctc ttatcttaaa ggagtttgct ccatctattc ctgagaagaa catcagttgt	540
ttgacccgcc tagaccataa cagggcactt ggtcagatct ctgagagact tgatgtccaa	600

gttagtgatg tgaagaatgt tatcatctgg ggcaatcact cttccagtca gtaccctgat 660  
 gtgaaccacg ccaccgtgaa nact 684

<210> 58  
 <211> 707  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (2)..(3)  
 <223> n is a, c, g, or t

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 acaaattgga tatgctcttg ttccgatgat tgctagggga attatgcttg gtgcggacca 180  
 gcctgttatt ctgcatatgc tggatattcc accagctgct gaagctctta atggtgttaa 240  
 gatggagttg gttgatgccg catttccact tctcaaggga gttgttgcaa caactgatgt 300  
 tgttgaggct tgcactggtg tgaatgttgc ggttatggtt ggtggattcc ccaggaagga 360  
 gggaatggaa aggaaggatg ttatgtctaa gaatgtttca atctacaaat ctcaagcatc 420  
 tgcccttgaa gcccatgcag ccccgaattg caaggttctg gttgttgcca atccagcaaa 480  
 caccaatgct cttatcttaa aggagtttgc tccatctatt cctgagaaga acatcagttg 540  
 tttgaccgcg ctagaccata acagggcact tggtcagatc tctgagagac ttgatgtcca 600  
 agttagtgat gtgaagaatg ttatcatctg gggcaatcac tcttccagtc agtaccctga 660  
 tgtgaaccac gccaccgtga agacttccag tggcgagaag cctgttc 707

<210> 59  
 <211> 801  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (685)..(685)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (799)..(799)  
 <223> n is a, c, g, or t

<400> 59  
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 aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac 120



aaattggata tgctcttggt ccgatgattg ctaggggaat tatgcttggt gcggaccagc	180
ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga	240
tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg	300
ttgaggcttg cactggtgtg aatgttgctg ttatggttg tggattcccc aggaaggagg	360
gaatggaaag gaaggatggt atgtctaaga atgtttcaat ctacaaatct caagcatctg	420
cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca	480
ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttggt	540
tgaccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag	600
ttagtgatgt gaagaatggt atcatctggg gcaatcactc ttccagtcag taccctgatg	660
tgaaccacgc caccgtgaag acttncagtg gcgagaagcc tgttcgcgaa cttgttaaag	720
acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatca	780
tcaaagcgag gaagctctnc a	801

<210> 60  
 <211> 563  
 <212> DNA  
 <213> *Lolium perenne*

<400> 60	
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accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca	120
aattggatat gctcttgttc cgatgattgc taggggaatt atgcttggtg cggaccagcc	180
tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat	240
ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt	300
tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg	360
aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc	420
ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac	480
caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt	540
gacccgccta gaccataaca ggc	563

<210> 61  
 <211> 692  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
 <221> misc\_feature  
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 <223> n is a, c, g, or t  
 <220>

<221> misc\_feature  
 <222> (34)..(34)  
 <223> n is a, c, g, or t

<220>  
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 <222> (692)..(692)  
 <223> n is a, c, g, or t

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 aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac 120  
 aaattggata tgctcttggt ccgatgattg ctagggggaat tatgcttggt gcggaccagc 180  
 ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga 240  
 tggagttggt tgatgccgca tttccacttc tcaagggagt tggtgcaaca actgatgttg 300  
 ttgaggcttg cactggtgtg aatgttgcgg ttatgggttg tggattcccc aggaaggagg 360  
 gaatggaaag gaaggatggt atgtctaaga atgtttcaat ctacaaatct caagcatctg 420  
 cccttgaagc ccatgcagcc ccgaattgca aggttctggt tggtgccaat ccagcaaaca 480  
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 tgacccgcct agaccataac agggcactcg gtcagatctc tgagagactt gatgtccaag 600  
 ttagtgatgt gaagaatggt atcatctggg gtaatcactc ttccagtcag taccctgatg 660  
 tgaaccacgc caccgtgaag acttccagtg gn 692

<210> 62  
 <211> 764  
 <212> DNA  
 <213> Lolium perenne

<400> 62  
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 aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac 120  
 aaattggata tgctcttggt ccgatgattg ctagggggaat tatgcttggt gcggaccagc 180  
 ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga 240  
 tggagttggt tgatgccgca tttccacttc tcaagggagt tggtgcaaca actgatgttg 300  
 ttgaggcttg cactggtgtg aatgttgcgg ttatgggttg tggattcccc aggaaggagg 360  
 gaatggaaag gaaggatggt atgtctaaga atgtttcaat ctacaaatct caagcatctg 420  
 cccttgaagc ccatgcagcc ccgaattgca aggttctggt tggtgccaat ccagcaaaca 480  
 ccaatgctct tatcttaaag gagttgctc catctattcc tgagaagaac atcagttggt 540  
 tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag 600  
 ttagtgatgt gaagaatggt atcatctggg gcaatcactc ttccagtcag taccctgatg 660  
 tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tggttcgcgaa cttgttaag 720

acgatgaatg gctaaatgca gggttcattg ccactgtcca gcag 764

<210> 63  
<211> 769  
<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (2)..(2)  
<223> n is a, c, g, or t

<400> 63  
gntccttcat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag 60  
aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac 120  
aaattggata tgctcttggt ccgatgattg ctaggggaat tatgcttggt gcggaccagc 180  
ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga 240  
tggagttggt tgatgccgca ttccacttc tcaagggagt tgttgcaaca actgatgttg 300  
ttgaggcttg cactggtgtg aatgttgcgg ttatggttg tggattcccc aggaaggagg 360  
gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg 420  
cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca 480  
ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttggt 540  
tgaccgcct agaccataac agggcactcg gtcagatctc tgagaggctt gatgtccaag 600  
ttagtgatgt gaagaatgtt atcatctggg gtaatcactc ttccagtcaa taccctgatg 660  
tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag 720  
acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtgg 769

<210> 64  
<211> 770  
<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (763)..(763)  
<223> n is a, c, g, or t

<400> 64  
gatccttatc ccgttgtcgt cgcctcctcc cgaccactct ccccatcccc gaactccaga 60  
accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca 120  
aattggatat gctcttggtc cgatgattgc taggggaatt atgcttggtg cggaccagcc 180  
tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat 240  
ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt 300

tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg	360
aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc taaaaatctc aagcatctgc	420
ccttgaagcc catgcagccc cgaattgcaa ggttctgggt gttgccaatc cagcaaacac	480
caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt	540
gacccgccta gaccataaca gggcacttgg tcagatctct gagagacttg atgtccaagt	600
tagtgatgtg aagaatgtta tcatctgggg caatcactct tccagtcagt accctgatgt	660
gaaccacgcc accgtgaaga cttccagtgg cgagaagcct gttcgcgaaac ttgttaaaga	720
cgatgaatgg ctaaatgcag gggttcattgc cactgtccag cancgtggtg	770

<210> 65  
 <211> 779  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
 <221> misc\_feature  
 <222> (2)..(2)  
 <223> n is a, c, g, or t

<400> 65 gntccctcat cccgttgtcg tcgcctcttc ccgaccactc tccccatccc cgaactccag	60
aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac	120
aaattggata tgctcttggt ccgatgattg ctaggggaat tatgcttggt gcggaccagc	180
ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga	240
tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcgaca actgatgttg	300
ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg	360
gaatggaaag gaaggatggt atgtctaaga atgtttcaat ctacaaatct caagcatctg	420
cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagtaaaca	480
ccaatgctct tatcctaaag gagtttgctc catctattcc tgagaagaac atcagttggt	540
tgacccgcct agaccataac agggcactcg gtcagatctc tgagagactt gatgtccaag	600
ttagtgatgt gaagaatggt atcatctggg gtaatcactc ttccagtcaa taccctgatg	660
tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag	720
acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatc	779

<210> 66  
 <211> 788  
 <212> DNA  
 <213> *Lolium perenne*

<220>

<221> misc\_feature  
 <222> (2)..(3)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (643)..(643)  
 <223> n is a, c, g, or t

<400> 66  
 gnncccttcac cccgttgctg tcgcctcctc ccgaccactc tccccatccc cgaactccag 60  
 aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac 120  
 aaattggata tgctcttggt ccgatgattg ctaggggaat tatgcttggt gcggaccagc 180  
 ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga 240  
 tggagttggt tgatgccgca ttccacttc tcaagggagt tgttgcaaca actgatgttg 300  
 ttgaggcttg cactggtgtg aatgttgctg ttatggttgg tggattcccc aggaaggagg 360  
 gaatggaaag gaaggatggt atgtctaaga atgtttcaat ctacaaatct caagcatccg 420  
 cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca 480  
 ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttggt 540  
 tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag 600  
 ttagtgatgt gaagaatggt atcatctggg gcaatcactc ttncagtcag taccctgatg 660  
 tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag 720  
 acgatgaatg gctaaatgca gggttcattg ccaactgtcca acagcgtggt gctgcaatca 780  
 tcaaagcg 788

<210> 67  
 <211> 794  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (8)..(8)  
 <223> n is a, c, g, or t

<400> 67  
 gttccttntc ccgttgctgt cgccctcctc cgaccactct ccccatcccc gaactccaga 60  
 accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca 120  
 aattggatat gctcttggtc cgatgattgc taggggaatt atgcttggtg cggaccagcc 180  
 tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat 240  
 ggagttggtt gatgccgcat ttccacttct caagggaggt gttgcaacaa ctgatgttgt 300  
 tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg 360  
 aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc 420

ccttgaagcc catgcagccc cgaattgcaa ggttctgggt gttgccaatc cagcaaacac	480
caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt	540
gaccgccta gaccataaca gggcactcgg tcagatctct gagaggcttg atgtccaagt	600
tagtgatgtg aagaatgtta tcatctgggg taatcactct tccagtcaat accctgatgt	660
gaaccacgcc accgtgaaga cttccagtgg cgagaagcct gttcgcgaac ttgttaaaga	720
cgatgaatgg ctaaattgcag ggttcattgc cactgtccag cagcgtggtg ctgcaatcat	780
caaagcgagg aagc	794

<210> 68  
 <211> 797  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (489)..(489)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (734)..(734)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (757)..(757)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (776)..(776)  
 <223> n is a, c, g, or t

<400> 68	
gntccttcat cccgttgctg tcgcctcttc ccgaccactc tccccatccc cgaactccag	60
aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac	120
aaattggata tgctcttggt ccgatgattg ctagggggaat tatgcttggt gcggaccagc	180
ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga	240
tggagttggt tgatgccga tttccacttc tcaagggagt tgttgcaaca actgatgttg	300
ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg	360
gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatccg	420
cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca	480

ccaatgctnt tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttggt	540
tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag	600
ttagtgatgt gaagaatggt atcatctggg gcaatcactc ttccagtcag taccctgatg	660
tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag	720
acgatgaatg gctnaatgca gggttcattg ccactgncca gcagcgtggt gctgcnatca	780
tcaaagcgag gaagctt	797

<210> 69  
 <211> 802  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (222)..(222)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (685)..(685)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (770)..(770)  
 <223> n is a, c, g, or t

<400> 69	
gaccttcat cccgttgctg tcgcctctc cgcaccactc tccccatccc cgaactccag	60
aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac	120
aaattggata tgctcttggt ccgatgattg ctaggggaaat tatgcttggt gcggaccagc	180
ctgttattct gcatatgctg gatattccac cagctgctga anctcttaat ggtgttaaga	240
tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg	300
ttgaggcttg cactggtgtg aatgttgcgg ttatggttg tggaattccc aggaaggagg	360
gaatggaaag gaaggatggt atgtctaaga atgtttcaat ctacaaatct caagcatctg	420
cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca	480
ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttggt	540
tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag	600
ttagtgatgt gaagaatggt atcatctggg gcaatcactc ttccagtcag taccctgatg	660
tgaaccacgc caccgtgaag acttncagtg gcgagaagcc tgttcgcgaa cttgttaaag	720
acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggn gctgcatcat	780
caaagcgagg aagctcttca gt	802

<210> 70  
 <211> 315  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (7)..(7)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (13)..(13)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (153)..(153)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (257)..(257)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (302)..(302)  
 <223> n is a, c, g, or t

<400> 70  
 gnccttnatc ccnttgctgt cgccctctcc cgaccactct ccccatcccc gaactccaga 60  
 accggctcca atggcggcca aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca 120  
 aattggatat gctcttggtc cgatgattgc tangggaatt atgcttggtg cggaccagcc 180  
 tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat 240  
 ggagttggtt gatgcncat ttccacttct caaggaggtt gttgcaacaa ctgatgttgt 300  
 tnaggcttgc actgg 315

<210> 71  
 <211> 525  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (23)..(23)



<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (26)..(26)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (78)..(78)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (269)..(269)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (493)..(493)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (515)..(515)

<223> n is a, c, g, or t

<400> 71

gntccttatc ccgttgctgt cgncctctcc cgaccactct ccccatcccc gaactccaga 60

accggctcca atggcgngga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca 120

aattggatat gctcttggtc cgatgattgc taggggaatt atgcttggtg cggaccagcc 180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat 240

ggagttgggt gatgccgat ttccacttnt caagggaggt gttgcaacaa ctgatgttgt 300

tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg 360

aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaatctc aagcatctgc 420

ccttgaagcc catgcagccc cgaattgcaa ggttctgggt gttgccaatc cagcaaacac 480

caatgctctt atnttaaagg agtttgctcc atctnttcct gagaa 525

<210> 72

<211> 696

<212> DNA

<213> Lolium perenne

<220>

<221> misc\_feature

<222> (7)..(7)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (547)..(547)

<223> n is a, c, g, or t

<220>

<221> misc\_feature  
<222> (603)..(603)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (613)..(613)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (632)..(632)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (642)..(642)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (646)..(646)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (674)..(674)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (681)..(681)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (683)..(683)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (691)..(691)  
<223> n is a, c, g, or t

<400> 72  
ttccttnctc ccgttgctgt cgctctctcc cgaaccactc tccccctccc gaactccaga 60  
accggctcca atggcgggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca 120  
aattggatat gctcttggtc cgatgattgc taggggaatt atgcttggtg cggaccagcc 180  
tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat 240  
ggagttgggt gatgccgat ttccacttct caagggaggt gttgcaacaa ctgatgttgt 300  
tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg 360  
aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc 420  
ccttgaagcc catgcagccc cgaattgcaa ggttctgggt gttgccaatc cagcaaacac 480  
caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagatgttt 540  
gaccgcgcta gaccataaca gggcactcgg tcagatctct gagagacttg atgtgcaagt 600

tancgatgtg aanaatgcta tcactctgggg anactactct tncagncata ccctgatgtg 660  
aaccacgcca ccgngaacac ntncactgcc nacaag 696

<210> 73  
<211> 646  
<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (6)..(6)  
<223> n is a, c, g, or t

<400> 73  
tccttnatcc cgttgtcgtc gcctcctccc gaaccctctc cccatccccg aactccagaa 60  
ccggctccaa tggcggcgaa ggaaccgatg cgcgtgctcg tcaccggcgc cgcaggacaa 120  
attggatatg ctcttggtcc gatgattgct aggggaatta tgcttggtgc ggaccagcct 180  
gttattctgc atatgctgga tattccacca gctgctgaag ctcttaatgg tgtaaatgatg 240  
gagttggttg atgccgcatt tccacttctc aagggaagttg ttgcaacaac tgatgttggt 300  
gaggcttgca ctggtgtgaa tgttgcggtt atggttggtg gattccccag gaaggagga 360  
atggaaagga aggatgttat gtctaagaat gtttcaatct acaaattctca agcatctgcc 420  
cttgaagccc atgcagcccc gaattgcaag gttctggttg ttgccaatcc agcaaacc 480  
aatgctctta tcttaaagga gtttgctcca tctattcctg agaagaacat cagttgtttg 540  
acccgcctag accataacag ggcacttggt cagatctctg agagacttga tgtccaagtt 600  
agtgatgtga aaaatgttat catctggggc aatcactctt ccagtc 646

<210> 74  
<211> 711  
<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (8)..(8)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (642)..(642)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (679)..(679)  
<223> n is a, c, g, or t

<400> 74  
accttctncc cgttgtcgtc gcctcctccc gaaccactct ccccatcccc gaactccaga 60

accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca	120
aattggatat gctcttgttc cgatgattgc taggggaatt atgcttggtg cggaccagcc	180
tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat	240
ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt	300
tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggagg	360
aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc	420
ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac	480
caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt	540
gaccgccta gaccataaca gggcactcgg tcagatctct gagagacttg atgtccaagt	600
tagtgatgtg aagaatgtta tcatctgggg taatcactct tncagtcaat accctgatgt	660
gaaccacgcc accgtgaana ctttcagtgg cgagaagcct gttcgcgaac t	711

<210> 75  
 <211> 768  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
 <221> misc\_feature  
 <222> (6)..(6)  
 <223> n is a, c, g, or t

<400> 75	
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ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg	180
ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg	240
agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttggtg	300
aggcttgcac tgggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa	360
tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc	420
ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca	480
atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga	540
ccgcctaga ccataacagg gcacttggtc agatctctga gagacttgat gtccaagtta	600
gtgatgtgaa gaatgttatc atctggggca atcactcttc cagtcagtac cctgatgtga	660
accacgccac cgtgaagact tccagtggcg agaagcctgt tcgcgaactt gttaaagacg	720
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<210> 76

<211> 783  
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 <213> Lolium perenne

<400> 76  
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 ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg 180  
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 agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttggtg 300  
 aggcttgcac tgggtgtgaat gttgcgggta tggttggtgg attccccagg aaggagggaa 360  
 tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc 420  
 ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca 480  
 atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga 540  
 cccgcctaga ccataacagg gcacttggtc agatctctga gagacttgat gtccaagtta 600  
 gtgatgtgaa gaatgttatc atctggggca atcactcttc cagtcagtac cctgatgtga 660  
 accacgccac cgtgaagact tccagtggcg agaagcctgt tcgcgaactt gttaaagacg 720  
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 <223> n is a, c, g, or t

<400> 77  
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 attggatatg ctcttggtcc gatgattgct aggggaatta tgcttggtgc ggaccagcct 180  
 gttattctgc atatgctgga tattccacca gctgctgaag ctcttaatgg tgtaagatg 240

gagttggttg atgccgcatt tccacttctc aagggagttg ttgcaacaac tgatgttggt	300
gaggcttgca ctggtgtgaa tgttgcggtt atggttggtg gattccccag gaaggagggg	360
atggaaagga aggatgttat gtctaagaat gtttcaatct acaaatctca agcatctgcc	420
cttgaagccc atgcagcccc gaattgcaag gttctggttg ttgccaatcc agcaaacacc	480
aatgctctta tcttaaagga gtttgctcca tctattcctg agaagaacat cagttgtttg	540
acccgcctag accataacag ggcactcggt cagatctctg agaggcttga tgtccaagtt	600
agtgatgtga agaattgtat catctggggt aatcactctt ccagtcaata ccctgatgtg	660
aaccacgcca ccgtgaagac ttccagtggc gagaagcctg ttcgcgaact tgntaaagac	720
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<210> 78  
 <211> 595  
 <212> DNA  
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 <223> n is a, c, g, or t

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 ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg 180  
 ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg 240  
 agttggttga tgccgcattt ccactttctca agggagtgtg tgcaacaact gatgttggtg 300  
 aggcttgcac tgggtgtgaat gttgcgggta tgggttggtg attccccagg aaggagggaa 360  
 tggaaaggaa ggatgttatg tctaanaatg tttcaatcta caaatcttaa gcatctgccc 420  
 ttgaagccca tgcacccna attgcaaggg tctggttggt gccaatccag caaacaccaa 480  
 tgcttttatt ttaaangagt ttgctccatn tattcctgan aagaacatna nttgtttgac 540  
 ccgcctagac cataacangg nncctgncaa aatctttnan agacttgntn tcaan 595

<210> 79  
 <211> 696  
 <212> DNA  
 <213> Lolium perenne

<220>  
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<400> 79  
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attggatatg ctcttggtcc gatgattgct aggggaatta tgcttggtgc ggaccagcct	180
gttattctgc atatgctgga tattccacca gctgctgaag ctcttaatgg tgtaagatg	240
gagttggttg atgccgcatt tccacttctc aaggaggttg ttgcaacaac tgatgttggt	300
gaggcttgca ctggtgtgaa tgttgcggtt atggttggtg gattccccag gaaggagga	360
atggaaagga aggatgttat gtctaanaat gtttcaatct acaaattctca agcatctgcc	420
cttgaagccc atgcagcccc gaattgcaag gttctggttg ttgccaatcc agcaaacacc	480
antgctctta tcttaaagga gtttgctcca tctatccctg agaagaacat cagttgtttg	540
accgcctag accataacag ggcacttggt cagatctctg agagacttga tgtccaagtt	600
agngatnga anaatgttat catctggggc aatcactctt ccagtcagta ccctgatgtg	660
aaccacgcca ccgngaagac ttccagtgnc gagann	696

<210> 80  
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 <212> DNA  
 <213> *Lolium perenne*

<220>  
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ttggatatgc tcttggtccg atgattgcta ggggaattat gcttggtgcg gaccagcctg	180
ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg	240
agttggttga tgccgcattt ccacttctca agggagttgt tgcaacgact gatgttggtg	300
aggcttgcac tgggtgtgaat gttgcggtta tgggttggtg attccccagg aaggagggaa	360
tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc	420
ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca	480
atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga	540
ccgcctaga ccataacagg gcacttggtc agatctctga gagacttgat gtccaagtta	600
gtgatgtgaa gaatgttatc atctggggca atcactcttc cagtcagtac cctgatgtga	660
accacgccac cgtgaagact tccagtggcg agaagcctgt tcgcgaactt gttaaagacg	720
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<210> 81

<211> 470  
 <212> DNA  
 <213> Lolium perenne

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 <223> n is a, c, g, or t

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 ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg 180  
 ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg 240  
 agttggttga tgccgcattt ccactttctca agggagtgtg tgcaacaact gatgttggtg 300  
 aggcttgcac tgggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa 360  
 tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc 420  
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<210> 82  
 <211> 599  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 tggatatgct cttgtttccga tgattgctag gggaattatg cttggtgcgg accagcctgt 180  
 tattctgcat atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga 240  
 gttggttgat gccgcatttc cacttctcaa gggagttggt gcaacaactg atgttggtga 300  
 ggcttgcaact ggtgtgaatg ttgcggttat ggttggtgga ttccccagga aggagggaaat 360  
 ggaaaggaag gatgttatgt ctaagaatgt ttcaatctac aaatctcaag catctgccct 420  
 tgaagcccat gcagccccga attgcaaggt tctggttggt gccaatccag caaacaccaa 480  
 tgctcttatc ttaaaggagt ttgtccatc tattcctgag aagaacatca gttgtttgac 540  
 ccgcctagac cataacaggg cacttggtca gatctctgan agacttgatg tccaagtta 599

<210> 83  
 <211> 606  
 <212> DNA  
 <213> Lolium perenne

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 <223> n is a, c, g, or t

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 ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg 180

ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg	240
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aggcttgac tggtgtgaat gctgcggtta tggttggtgg attccccagg aaggaggga	360
tgaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc	420
ttgaagccca tgcagcccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca	480
atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga	540
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 <211> 686  
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tggatatgct cttgttccga tgattgctag ggggaattatg ctcggtgcgg accagcctgt	180
tattctgcat atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga	240
gttggttgat gccgcatttc cacttctcaa gggagttggt gcaacaactg atgttgttga	300
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ggaaaggaag gatgttatgt ctaagaatgt ttcaatctac aaatctcaag catctgccct	420
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cgcctagacc ataacagggc acttggtcag atctctgaga gacttgatgt ccaagttagt	600
gatgtgaaga atgttatcat ctggggcaat cactcttcca gtcagtaccc tgatgtgaac	660
cacgccaccg tgaagacttt cagtgg	686

<210> 85  
 <211> 341  
 <212> DNA  
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 tggatatgct cttgttccga tgattgctan gggaattatg cttggtgcmg accancctgt 180  
 tattctgcat atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga 240  
 gttggttgat gccgcatttc cacttctcaa gggagntgnt gcaacaactg atgttgntga 300  
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<211> 349  
<212> DNA  
<213> Lolium perenne

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ggatatgctc ttgttccgat gattgctagg ggaattatgc ttggtgcgga ccagcctgtt      180
attctgcata tgcaggatat tccaccagct gctgaagctc ttaatggtgt taagatggag      240
ttggnatgatg ccgcatttcc acttntcaag ggagttgntg caacaactga tgtngttgan      300
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<212> DNA
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<400> 87  
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 gctccaatgg cggcgaagga accgatgctc gtgctcgtca ccggcgccgc aggacaaatt 120  
 ggatatgctc ttgttccgat gattgctagg ggaattatgc ttggtgcgga ccagcccgtt 180  
 attctgcata tgctggatat tccaccagct gctgaagctc ttaatggtgt taagatggag 240  
 ttggttgatg ccgcatttcc acttctcaag ggagttgttg caacaactga tgttgttgag 300  
 gcttgactg gtgtgaatgt tgcggttatg gttggtggat tccccaggaa ggaggggaatg 360  
 gaaaggaagg atgttatgtc taagaatggt tcaatctaca aatctcaagc atctgccctt 420  
 gaagcccatg cagccccgaa ttgcaagggt ctggttggtg ccaatccagc aaacaccaat 480  
 gctcttatct taaaggagnt tgctccatct attcctgaga anaacatcag ntgtttgacc 540  
 cgcctagacc ataacaggnc actcggncag anctctgaga gacntgatgc ccaagntngn 600  
 gntgn 605

<210> 88  
 <211> 685  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (1)..(1)  
 <223> n is a, c, g, or t



<400> 88  
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gatatgctct tgttccgatg attgctaggg gaattatgct tgggtgcggac cagcctgtta 180  
ttctgcatat gctggatatt ccaccagctg ctgaagctct taatggtggt aagatggagt 240  
tggttgatgc cgcatttcca cttctcaagg gagttgttgc aacaactgat gttgttgagg 300  
cttgcaactg tgtgaatggt gcggttatgg ttggtggatt ccccaggaag gagggaatgg 360  
aaaggaagga tgttatgtct aagaatgttt caatctacaa atctcaagca tctgcccttg 420  
aagcccatgc agccccgaat tgcaagggtt tggttgttgc caatccagca aacaccaatg 480  
ctcttatctt aaaggagttt gctccatcta ttcttgagaa gaacatcagt tgtttgaccc 540  
gcctagacca taacagggca cttggtcaga tctctgagag acttgatgtc caagttagt 600  
atgtgaagaa tgttatcatc tgggcaaadc actcttccag tcagtaccct gatgtgaacc 660  
acgccaccgt gaagacttcc agtgg 685

<210> 89  
<211> 763  
<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (4)..(4)  
<223> n is a, c, g, or t

<400> 89  
ctcntcccgt tgtcgtcgcc tcctcccgac cactctcccc atccccgaac tccagaaccg 60  
gctccaatgg cggcgaaggaa accgatgcgc gtgctcgtca cggcgccgc aggacaaatt 120  
ggatatgtc ttgttccgat gattgctagg ggaattatgc ttggtgcgga ccagcctgtt 180  
attctgcata tgctggatat tccaccagct gctgaagctc ttaatggtgt taagatggag 240  
ttggttgatg ccgcatttcc acttctcaag ggagttgttg caacaactga tgttggtgag 300  
gcttgcaactg gtgtgaatgt tgcggttatg gttggtggat tccccaggaa ggagggaatg 360  
gaaaggaagg atgttatgtc taagaatggt tcaatctaca aatctcaagc atctgccctt 420  
gaagcccatg cagccccgaa ttgcaagggt ctggttggtg ccaatccagc aaacaccaat 480  
gctcttatct taaaggagtt tgctccatct attcctgaga agaacatcag ttgtttgacc 540  
cgcctagacc ataacagggc acttggtcag atctctgaga gacttgatgt ccaagttagt 600  
gatgtgaaga atgttatcat ctggggcaat cactcttcca gtcagtaccc tgatgtgaac 660  
cacgccaccg tgaagacttc cagtggcgag aagcctgttc gcgaacttgt taaagacgat 720  
gaatggctaa atgcagggtt cattgccact gtccagcagc gtg 763

<210> 90  
 <211> 790  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
 <221> misc\_feature  
 <222> (3)..(3)  
 <223> n is a, c, g, or t

<400> 90  
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 ctccaatggc ggcgaaggaa ccgatgcgcg tgctcgtcac cggcgccgca ggacaaattg 120  
 gatatgctct tggtccgatg attgctaggg gaattatgct tgggtcggac cagcctgtta 180  
 ttctgcatat gctggatatt ccaccagctg ctgaagctct taatggtggt aagatggagt 240  
 tggttgatgc cgcatttcca cttctcaagg gagttgttgc aacaactgat gttgttgagg 300  
 cttgcactgg tgtgaatggt gcggttatgg ttggtggatt ccccaggaag gagggaaatg 360  
 aaaggaagga tggtatgtct aagaatgttt caatctacaa atctcaagca tctgcccctg 420  
 aagcccatgc agccccgaat tgcaagggtt tggttgttgc caatccagca aacaccaatg 480  
 ctcttatctt aaaggagttt gctccatcta ttcctgagaa gaacatcagt tgtttgacct 540  
 gcctagacca taacagggca cttgggtcaga tctctgagag acttgatgtc caagttagtg 600  
 atgtgaagaa tggtatcatc tggggcaatc actcttccag tcagtaccct gatgtgaacc 660  
 acgccaccgt gaagacttcc agtggcgaga agcctgttcg cgaacttggt aaagacgatg 720  
 aatggctaaa tgcagggttc attgccactg tccagcagcg tgggtgctgca atcatcaaag 780  
 cgaggaagct 790

<210> 91  
 <211> 690  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
 <221> misc\_feature  
 <222> (678)..(678)  
 <223> n is a, c, g, or t

<400> 91  
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 tccaatggcg gcgaaggaa c gatgcgcgt gctcgtcacc ggcgccgcag gacaaattgg 120  
 atatgctctt gttccgatga ttgctagggg aattatgctt ggtgcggacc agcctgttat 180  
 tctgcatatg ctggatattc caccagctgc tgaagctctt aatggtgtta agatggagtt 240  
 ggttgatgcc gcatttccac ttctcaaggg agttgttgca acaactgatg ttgttgaggc 300

ttgcactggt gtgaatgttg cggttatggt tgggtgattc cccaggaagg aggggaatgga	360
aaggaaggat gttatgtcta agaatgtttc aatctacaaa tctcaagcat ctgcccttga	420
agcccatgca gccccgaatt gcaaggttct gggtgttgcc aatccagcaa acaccaatgc	480
tcttatctta aaggagtttg ctccatctat tcctgagaag aacatcagtt gtttgacccg	540
cctagaccat aacagggcac tcggtcagat ctctgagaga cttgatgtcc aagttagtga	600
tgtgaagaat gttatcatct ggggtaatca ctcttcagat caataccctg atgtgaacca	660
cgccaccgtg aagacttnca gtggcgagaa	690

<210> 92  
 <211> 700  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (679)..(679)  
 <223> n is a, c, g, or t

<400> 92	
ttctcccgtt gtcgtcgctt cctcccgaac cactctcccc tccccgaact ccagaaccgg	60
ctccaatggc ggcgaaggaa ccgatgcgcg tgctcgtcac cggcgccgca ggacaaattg	120
gatatgctct tgttccgatg attgctaggg gaattatgct tgggtcggac cagcctgtta	180
ttctgcatat gctggatatt ccaccagctg ctgaagctct taatggtgtt aagatggagt	240
tggttgatgc cgcatttcca cttctcaagg gagttgttgc aacaactgat gttgttgagg	300
cttgactggt tgtgaatggt gcggttatgg ttgggtgatt ccccaggaag gaggggaatgg	360
aaaggaagga tgttatgtct aagaatgttt caatctacaa atctcaagca tctgcccttg	420
aagcccatgc agccccgaat tgcaagggtc tgggtgttgc caatccagca aacaccaatg	480
ctcttatctt aaaggagttt gctccatcta ttctgagaa gaacatcagt tgtttgaccc	540
gcctagacca taacagggca ctcggtcaga tctctgagag acttgatgtc caagttagtg	600
atgtgaagaa tgttatcatc tggggtaatc actcttcag tcaataccct gatgtgaacc	660
acgccaccgt gaagacttnc agtggcgaga agcctgttcg	700

<210> 93  
 <211> 679  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (515)..(515)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (524)..(524)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (526)..(526)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (571)..(571)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (575)..(575)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (596)..(596)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (617)..(617)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (627)..(627)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (631)..(631)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (643)..(643)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (660)..(660)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (671)..(671)  
 <223> n is a, c, g, or t

<400> 93  
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 caatggcggc gaaggaaccg atgcgcgtgc tcgtcaccgg cgccgcagga caaattggat 120  
 atgctcttgt tccgatgatt gctaggggaa ttatgcttgg tgcggaccag cctgttattc 180  
 tgcatatgct ggatattcca ccagctgctg aagctcttaa tgggtgtaag atggagttgg 240

ttgatgccgc atttccactt ctcaagggag ttgttgcaac aactgatggt gttgaggctt	300
gcactggtgt gaatgttgcg gttatggttg gtggattccc caggaaggag ggaatggaaa	360
ggaaggatgt tatgtctaaa aatgtttcaa tctacaaatc tcaagcatct gcccttgaag	420
cccatgcagc cccgaattgc aaggttctgg ttgttgccaa tccagcaaac accaatgctt	480
ttatcttaaa ggagtttgct ccatctattc ctganaagaa catnanttgt ttgacccgcc	540
taaaccataa cagggcactt ggtcagatct ntganagact tgatggccaa gttagnatg	600
tgaaaaatgt tatcatntgg ggcaatnact nttccagtca gtnccctgat gtgaaccacn	660
cccccgaaa nacttccag	679

<210> 94  
 <211> 676  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (27)..(27)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (676)..(676)  
 <223> n is a, c, g, or t

<400> 94	
cggtgtcgtc gcctcctccc gaccctnctc ccctccccga actccagaac cggctccaat	60
ggcggcgaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa ttggatatgc	120
tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg ttattctgca	180
tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg agttggttga	240
tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttggtg aggcctgcac	300
tgggtgtgaat gttgcggtta tggttggttg attccccagg aaggagggaa tggaaaggaa	360
ggatgttatg tctaagaatg tttcaatcta caaatctcaa gtatctgccc ttgaagccca	420
tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca atgctcttat	480
cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga cccgcctaga	540
ccataacagg gcacttggtc agatctctga gagacttgat gtccaagtta gtgatgtgaa	600
gaatgttatc atctggggca atcactcttc cagtcagtac cctgatgtga accacgccac	660
cgtgaagact tccagn	676

<210> 95  
 <211> 786  
 <212> DNA  
 <213> Lolium perenne

<400> 95  
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aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac aaattggata 120  
tgctcttggt cccgatgattg ctaggggaat tatgcttggt gcggaccagc ctgttattct 180  
gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga tggagttggt 240  
tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg ttgaggcttg 300  
cactgggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg gaatggaaag 360  
gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg cccttgaagc 420  
ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca ccaatgctct 480  
tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttatt tgacccgcct 540  
agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag ttagtgatgt 600  
gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg tgaaccacgc 660  
caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag acgatgaatg 720  
gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatca tcaaagcgag 780  
gaagct 786

<210> 96  
<211> 772  
<212> DNA  
<213> *Lolium perenne*

<220>  
<221> misc\_feature  
<222> (29)..(29)  
<223> n is a, c, g, or t

<400> 96  
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cgcgtgctcg tcaccggcgc cgcaggacaa attggatatg ctcttgttcc gatgattgct 120  
aggggaatta tgcttggtgc ggaccagcct gttattctgc atatgctgga tattccacca 180  
gctgctgaag ctcttaatgg tgtaagatg gagttggttg atgccgcatt tccacttctc 240  
aaggagttg ttgcaacaac tgatgttggt gaggcttgca ctggtgtgaa tgttgcggtt 300  
atggttggtg gatccccag gaaggaggga atggaaagga aggatgttat gtctaagaat 360  
gtttcaatct acaaattctc agcatctgcc cttgaagccc atgcagcccc gaattgcaag 420  
gttctgggtg ttgccaatcc agcaaacacc aatgctctta tcttaaagga gtttgctcca 480  
tctattcctg agaagaacat cagttgtttg acccgctag accataacag ggcacttggt 540  
cagatctctg agagacttga tgtccaagtt agtgatgtga agaattgttat catctggggc 600  
aatcactctt ccagtcagta ccctgatgtg aaccacgcca ccgtgaggac ttccagtggc 660

gagaagcctg ttcgcgaact tgtaaagac gatgaatggc taaatgcagg gttcattgcc	720
actgtccagc agcgtggtgc tgcaatcatc aaagcgagga agctctccag tg	772

<210> 97  
 <211> 676  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (1)..(1)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (7)..(7)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (9)..(9)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (14)..(14)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (36)..(36)  
 <223> n is a, c, g, or t

<400> 97	
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cgccgcagga caaattggat atgctcttgt tccgatgatt gctaggggaa ttatgcttgg	120
tgccgaccag cctgttattc tgcatatgct ggatattcca ccagctgctg aagctcttaa	180
tggtgttaag atggagttgg ttgatgccgc atttccactt ctcaagggag ttgttgcaac	240
aactgatgtt gttgaggctt gcaactggtgt gaatgttgcg gttatggttg gtggattccc	300
caggaaggag ggaatggaaa ggaaggatgt tatgtctaag aatgtttcaa tctacaaatc	360
tcaagcatct gcccttgaag cccatgcagc cccgaattgt aaggttctgg ttgttgccaa	420
tccagcaaac accaatgctc ttatcttaaa ggagtttgct ccatctattc ctgagaagaa	480
catcagttgt ttgaccgcgc tagaccataa cagggcactc ggtcagatct ctgagagact	540
tgatgtccaa gttagtgatg tgaagaatgt tatcatctgg ggtaatcact cttccagtca	600
ataccctgat gtgaaccacg ccaccgtgaa gacttccagt ggcgagaagc ctgttcgcga	660
acttgtaaaa gacgat	676

<210> 98  
 <211> 763

<212> DNA  
<213> *Lolium perenne*

<220>  
<221> misc\_feature  
<222> (36)..(36)  
<223> n is a, c, g, or t

<400> 98  
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attccaccag ctgctgaagc tcttaatggt gttaagatgg agttggttga tgccgcattt 180  
ccacttctca agggagttgt tgcaacaact gatgttggtg aggcttgcac tgggtgtgaat 240  
gttgcggtta tggttggtgg attccccagg aaggaggga tggaaaggaa ggatgttatg 300  
tctaagaatg tttcaatcta caaatctcaa gcatctgccc ttgaagccca tgcagccccg 360  
aattgcaagg ttctggttgt tgccaatcca gcaaacacca atgctcttat cttaaaggag 420  
tttgctccat ctattcctga gaagaacatc agttgtttga cccgcctaga ccataacagg 480  
gcacttggtc agatctctga gagacttgat gtccaagtta gtgatgtgaa gaatgttatc 540  
atctggggca atcactcttc cagtcagtac cctgatgtga accacgccac cgtgaagact 600  
tccagtggcg agaagcctgt tcgcaactt gttaaagacg atgaatggct aaatgcaggg 660  
ttcattgcca ctgtccagca gcgtggtgct gcaatcatca aagcgaggaa gctctccagt 720  
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<210> 99  
<211> 513  
<212> DNA  
<213> *Lolium perenne*

<220>  
<221> misc\_feature  
<222> (435)..(435)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (453)..(453)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (458)..(458)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (469)..(469)  
<223> n is a, c, g, or t

<220>



<221> misc\_feature  
 <222> (472)..(472)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (482)..(482)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (485)..(486)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (488)..(488)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (491)..(491)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (500)..(501)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (503)..(503)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (506)..(506)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (511)..(511)  
 <223> n is a, c, g, or t

<400> 99  
 tatgcttggt gcggccagcc tggtattctg catatgctgg atattccacc agctgctgaa 60  
 gctcttaatg gtgttaagat ggagttgggt gatgccgcat ttccacttct caagggagtt 120  
 gttgcaacaa ctgatgttgt tgaggcttgc actggtgtga atgttgcggt tatggttggt 180  
 ggattcccca ggaaggaggg agtggaagg aaggatgtta tgtctaagaa tgtttcaatc 240  
 tacaaatctc aagcatctgc ccttgaagcc catgcagccc cgaattgcaa ggttctgggt 300  
 gttgccaatc cagcaaacac caatgctctt atcttaaagg agtttgctcc atctattcct 360  
 gagaagaaca tcagttgttt gacccgccta gaccataaca gggcacttgg tcagatctct 420  
 gagagacttg atgtncaggt tagtgatgtg aanaatgnta tcatctggnc anctcactct 480  
 tncanncntt nccctgatgn nanccncgcc ncg 513

<210> 100  
 <211> 664  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (83)..(83)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (85)..(86)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (241)..(241)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (534)..(534)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (570)..(570)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (576)..(576)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (605)..(605)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (610)..(610)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (620)..(620)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (640)..(640)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (650)..(650)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (653)..(653)

<223> n is a, c, g, or t

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<222> (657)..(657)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (660)..(660)

<223> n is a, c, g, or t

<400> 100

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gtttcaatct acaaattctca agngnntgcc cttgaagccc atgcagcccc gaattgcaag 120

gttctggttg ttgccaatcc agcaaacacc aatgctctta tcttaaagga gtttgctcca 180

tctattcctg agaagaacat cagttgtttg acccgctag accataacag ggcacttggt 240

nagatctctg agagacttga tgtccaagtt agtgatgtga agaattgttat catctggggc 300

aatcactctt ccagtcagta ccctgatgtg aaccacgcca ccgtgaagac ttccagtggc 360

gagaagcctg ttcgcaact tgttaaagac gatgaatggc taaatgcagg gttcattgcc 420

actgtccagc agcgtggtgc tgcaatcatc aaagcgagga agctttccag tgctcttttt 480

gctgccagct ctgcttgta ccacatccgg gattgggttc tcggaacccc tganggaaca 540

tttgtttcca tgggtgtgta ttctgatggn tatacnnggt gcctgggtggg cttatctact 600

ccttnccagn aacttgctgn gggggggaat ggacaattgn tcaaaggctn ccnatchnacn 660

agtt 664

<210> 101

<211> 734

<212> DNA

<213> Lolium perenne

<220>

<221> misc\_feature

<222> (722)..(722)

<223> n is a, c, g, or t

<400> 101

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ccagcaaaca ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac 120

atcagttggt tgaccgcct agaccataac agggcactcg gtcagatctc tgagagactt 180

gatgtccaag ttagtgatgt gaagaatggt atcatctggg gtaatcactc ttccagtcaa 240

taccctgatg tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa 300

cttgtaaag acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggt	360
gctgcaatca tcaaagcgag gaagctctcc agtgctctct ctgctgccag ctctgcttgt	420
gaccacatcc gtgattgggt tcttgaacc cctgagggaa catttgtttc catgggtgtg	480
tattctgatg gttcatatcg tgtgcctgct gggcttatct actccttccc agtaacttgc	540
tgcggtggtg aatggacaat tgttcaaggg ctcccgatcg acgagttctc aagaaagaag	600
atggatgcca cagcccagga gctctcggag gagaaggctc tcgcctactc gtgcctcgag	660
taactgcata ccaggagga gctgccgctc tgatgttttg aataaaagga acattttggc	720
tncatgaaac tcat	734

<210> 102  
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 <213> Lolium perenne

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<400> 102	
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tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttggt tgacccgcct	120

agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag ttagtgatgt	180
gaagaatggt atcatctggg gcaatcactc ttccagtcag taccctgatg tgaaccacgc	240
caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag acgatgaatg	300
gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatca tcaaagcgag	360
gaagctctcc agtgctctct ctgctgccag ctctgcttgt gaccacatcc gtgattgggt	420
tctcggaaacc cctgagggaa catttgtttc catggnctgtg tattctgatg gttcatacgg	480
tgtgcctgct gggcttatct actccttccc agtaacttgc tgcggtggtg aatggacaat	540
tgttcaaggg ctcccgatcg acgagttctc aagaaagaag atggatgcca cagcccagga	600
gctctcgnag gagaaggctc tcgcctactc gtgcctcgag taactgcata ccaggagca	660
gctgtcgtc tgatgttttg aataaaagna cattttgnct ncatg	705

<210> 103  
 <211> 667  
 <212> DNA  
 <213> *Lolium perenne*

<400> 103	
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ttaaaggagt ttgctccatc tattcttgag aagaacatca gttgtttgac ccgcctagac	120
cataacaggg cacttggtca gatctctgag agacttgatg tccaagttag tgatgtgaag	180
aatgttatca tctggggcaa tcactcttcc agtcagtacc ctgatgtgaa ccacgccacc	240
gtgaagactt ccagtggcga gaagcctggt cgcgaacttg ttaaagacga tgaatggcta	300
aatgcagggt tcattgccac tgtccagcag cgtggtgctg caatcatcaa agcgaggaag	360
ctctccagtg ctctctctgc tgccagctct gcttgtgacc acatccgtga ttgggttctc	420
ggaacccttg agggaaacatt tgtttccatg ggtgtgtatt ctgatggttc atacggtgtg	480
cctgctgggc ttatctactc cttcccagta acttgctgcg gtggtgaatg gacaattggt	540
caagggctcc cgatcgacga gttctcaaga aagaagatgg atgccacagc ccaggagctc	600
tcggaggaga aggtctctgc ctactcgtgc ctcgagtaac tgcataccag ggagcagctg	660
ccgctct	667

<210> 104  
 <211> 748  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
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 <222> (28)..(28)  
 <223> n is a, c, g, or t  
 <400> 104

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cgagaagcct	gttcgcgaac	ttgttaaaga	cgatgaatgg	ctaaatgcag	ggttcattgc	120
cactgtccag	cagcgtggtg	ctgcaatcat	caaagcgagg	aagctctcca	gtgctctctc	180
tgctgccagc	tctgcttggtg	accacatccg	tgattggggt	ctcggaaccc	ctgaggggaa	240
atgtgtttcc	atgggtgtgt	attctgatgg	ttcatacggg	gtgcctgctg	ggcttatcta	300
ctccttccca	gtaacttgct	gcgggtggtga	atggacaatt	gttcaagggc	tcccgatcga	360
cgagttctca	agaaagaaga	tggatgccac	agcccaggag	ctctcggagg	agaaggctct	420
cgcctactcg	tgccctgagt	aactgcatac	cagggagcag	ctgccgctct	gatgttttga	480
ataaaaggaa	catttttggt	ccatgaaact	catctccact	cagaacagtt	gcacatcgcg	540
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tgatgattta	caggacagga	tattggcagg	aagattggaa	caatttgacg	tctgattaaa	660
accaacctct	tattattccc	gtgtgtatga	atgaggcttt	tgtagctcta	ttttcgccctg	720
atgatttaca	ggccatgata	ttggcagg				748

<210> 105  
 <211> 646  
 <212> DNA  
 <213> *Lolium perenne*

<400> 105						
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tgctgcaatc	atcaaagcga	ggaagctctc	cagtgtctctc	tctgtctgcca	gctctgcttg	180
tgaccacatc	cgtgattggg	ttctcgggaa	ccctgagggg	acatttggtt	ccatgggtgt	240
gtattctgat	ggttcatac	gtgtgcctgc	tggtgttatc	tactccttcc	cagtaacttg	300
ctgcgggtgg	gaatggacaa	ttgttcaagg	gctcccgggc	gacgagttct	caagaaagaa	360
gatggatgcc	acagcccagg	agctctcgga	ggagaaggct	cttgccctact	cgtgcctcga	420
gtaactgcat	accagggagc	agctgccgct	ctgatgtttt	gaataaaagg	aacatttttg	480
ctccatgaaa	ctcatctcca	ctcagaacag	ttgcacatcg	cggtgccttt	agctgggttt	540
tccagtgtgt	atgaatgagg	cttttgtagc	tctattttcg	cctgatgatt	tacaggacag	600
gatattggca	ggaagattgg	aacaatttga	cgtctgatta	aaacca		646

<210> 106  
 <211> 750  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
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 <223> n is a, c, g, or t

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 <222> (82)..(82)  
 <223> n is a, c, g, or t

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 tctctctgct gccagctctg cttgtgacca catccgtgat tgggttctcg gaacccctga 180  
 gggaacattt gtttccatgg gtgtgtattc tgatggttca tacggtgtgc ctgctgggct 240  
 tatctactcc ttcccagtaa cttgctgcgg tggatgaatgg acaattgttc aagggctccc 300  
 gatcgacgag ttctcaagaa agaagatgga tgccacagcc caggagctct cggaggagaa 360  
 ggctctcgcc tactcgtgcc tcgagtaact gcataccagg gagcagctgc cgctctgatg 420  
 ttttgaataa aaggaacatt ttggctccat gaaactcatc tccactcaga acagttgcac 480  
 atcgcggtgc cttcagctgg tttttccagt gtgtatgaat gaggcctttg tagctctatt 540  
 ttcgcctgat gatttacagg acaggatatt ggcaggaaga ttggaacaat ttgacgtctg 600  
 attaaaacca acctcttatt attcctgtgt gtatgaatga ggcttttgta gctctatatt 660  
 cgcctgatga ttacaggcc atgatattgg caggaggatt ggaacaattt gacgcctgat 720  
 taaaaccaac ctcttattac taaaaaaaaa 750

<210> 107  
 <211> 616  
 <212> DNA  
 <213> Lolium perenne

<400> 107  
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 ccactgtcca gcagcgtggt gctgcaatca tcaaagcgag gaagctctcc agtgctctct 120  
 ctgctgccag ctctgcttgt gaccacatcc gtgattgggt tctcggaacc cctgagggaa 180  
 ctttgtttc catgggtgtg tttctgatg gttcatacgg tgtgcctgct gggcttatct 240  
 actccttccc agtaacttgc tgcggtggtg aatggacaat tgttcaaggc ctcccgatcg 300  
 acgagttctc aagaaagaag atggatgcca cagcccagga gctctcgag gagaaggctc 360  
 tcgcctactc gtgcctcgag taactgcata ccaggagagca gctgccgctc tgatgttttg 420  
 aataaaagga acattttggc tccatgaaac tcatctccac tcagaacagt tgcacatcgc 480  
 ggtgccttta gctggttttt ccagtgtgta tgaatgaggc ttttgtagcg ctattttcgc 540  
 ctgatgattt acaggacagg atattggcag gaagattgga acaatttgac gtctgattaa 600  
 aaccaacctc ttatta 616

<210> 108  
 <211> 418  
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 <213> Lolium perenne

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 <223> n is a, c, g, or t

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 gatgttttga ataaaaggaa cattttggct ccatgaaact catctccact cagaacagtt 180  
 gcacatcgcg gtgccttttag ctggtttttc cagtgtgtat gantgaggct tttgtagctc 240  
 tattttcgcc tgatgattta caggacagga tattggcagg aagattggaa caatttgacg 300  
 tctgattaa accaacctct tattattcct gtgtgtatga atgaggcttt ttagtagctc 360  
 ttttcgcctg atgatttaca ggacatgata ttggcaggag gattggaaca annanann 418

<210> 109  
 <211> 265  
 <212> DNA  
 <213> Lolium perenne

<400> 109  
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 tgccgctctg atgttttgaa taaaaggaa attttggtc catgaaactc atctccactc 120  
 agaacagttg cacatcgcg tgccttttagc tggtttttcc agtgtgtatg aatgaggctt 180  
 ttgtagctct attttcgct gatgatttac aggacaggat attggcagga agattggaac 240  
 aatttgacgt ctgacaaaaa aaaaa 265



<210> 110  
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 <223> n is a, c, g, or t

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 aagattggaa caatttgacg tctgattaaa accaacctct tatattcctg tgtgtatgaa 120  
 tgaggctttt gtagctctat tttcgctga tgatttacag gccacgatat tggcaggagg 180  
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<210> 111  
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 <213> Lolium perenne

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 <223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<210> 112  
<211> 58  
<212> PRT  
<213> Lolium perenne

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<400> 112

Xaa His Lys Ala Ala Gln Ser Asn Xaa Xaa Asn Ile Ile Ser Asn Pro  
 1 5 10 15

Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Phe Lys Lys Ala Gly  
 20 25 30

Thr Tyr Asn Xaa Lys Arg Leu Leu Gly Val Asp Asn Xaa Xaa Met Xaa  
 35 40 45

Xaa Thr Asp Xaa Ala Leu Xaa Xaa Arg Gly  
 50 55

<210> 113  
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 <213> Lolium perenne

<220>  
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accaaggaac catggcagca cgagctacag tggcctaaag gcatcatcgt cgtcgatcag 180  
cttcgaatca ggaacatcat tcctgggcaa gaccgcctcc ctccgggcaa ctgttaccac 240  
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tctcagccac tgcaacacgc ctgctcaggt catggacttc actggccccg cagagctagc 480  
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catgaccctg gatgaccttt ttaacatnaa tgcgggaatc gncaagtcgc ttattgaggc 600  
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ccct 664

<210> 114  
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<213> Lolium perenne

<220>  
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<223> Xaa can be any naturally occurring amino acid

<220>  
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<220>  
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<223> Xaa can be any naturally occurring amino acid

<220>  
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<222> (194)..(194)  
<223> Xaa can be any naturally occurring amino acid

<400> 114

Xaa Arg Ser Arg Arg Arg Gly Ala Glu Phe His Leu Xaa Thr Leu Pro

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Ala	Ser	Ala	Val
	25	Thr	Ile
Ser	Ser	Val	Ser
	30		
Ala	Gln	Ala	Ala
	35	Leu	Val
Ser	Lys	Pro	Arg
	40	Asn	His
Gly	Ser	Thr	Ser
	45		
Tyr	Ser	Gly	Leu
	50	Lys	Ala
Ser	Ser	Ser	Ser
	55	Ile	Ser
Phe	Glu	Ser	Gly
	60		
Thr	Ser	Phe	Leu
	65	Gly	Lys
Thr	Ala	Ser	Leu
	70	Arg	Ala
Thr	Val	Thr	Thr
	75		80
Arg	Val	Val	Pro
	85	Lys	Ala
Lys	Ser	Gly	Ser
	90	Gln	Ile
Ser	Pro	Gln	Ala
	95		
Ser	Tyr	Lys	Val
	100	Ala	Val
Leu	Gly	Ala	Ala
	105	Gly	Gly
Ile	Gly	Gln	Pro
	110		
Leu	Gly	Leu	Leu
	115	Ile	Lys
Met	Ser	Pro	Leu
	120	Val	Ser
Glu	Leu	Arg	Leu
	125		
Tyr	Asp	Ile	Ala
	130	Asn	Val
Lys	Gly	Val	Ala
	135	Ala	Ala
Asp	Leu	Ser	His
	140	Cys	
Asn	Thr	Pro	Ala
	145	Gln	Val
Met	Asp	Phe	Thr
	150	Gly	Pro
Ala	Glu	Leu	Ala
	155		160
Glu	Cys	Leu	Lys
	165	Gly	Val
Asp	Val	Val	Val
	170	Ile	Pro
Ala	Gly	Val	Pro
	175		
Arg	Lys	Pro	Gly
	180	Met	Thr
Arg	Asp	Asp	Leu
	185	Phe	Asn
Xaa	Asn	Ala	Gly
	190		
Ile	Xaa	Lys	Ser
	195	Leu	Ile
Glu	Ala	Val	Ala
	200	Asp	Asn
Cys	Pro	Glu	Gly
	205		
Leu	Ile	His	Ile
	210	Ile	Asn
Asn	Pro	Gly	Gln
	215	Thr	Pro
Pro	Pro		
	220		

<210> 115  
 <211> 1263  
 <212> DNA  
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<222> (7)..(7)

<223> n is a, c, g, or t

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aagttggaga tggcatcagc tgttaccatc agctcagtca gcgcgcaggc cgctttggtc 180

tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc atcatcgctc	240
atcagcttcg aatcagggac atcattcctg ggcaagaccg cctctcttcg ggcgactatc	300
acctcaagga ttgtgccaaa ggcaaagtct ggggtctcaga tatcacctca ggcctcgtac	360
aaggtggcgg tgcttggtgc tgccggtggc atcgggtcaac cactgggcct gctgatcaag	420
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gcagatctca gccactgcaa cacgccttct cagggtcatgg acttcactgg cccagcagaa	540
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gaggctgttg cagacaactg ccctgaggcc ttcattcata tcatcagcaa cccggtcaac	720
tccactgtgc cgattgctgc tgagattctg aaacagaagg gcgtctacaa cccaagaag	780
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aag	1263

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Lys Thr Lys Xaa Asn Gln Xaa Ala Arg Gly Glu Pro Gly Arg Thr Gln  
 20 25 30

Gln Phe Pro Ser Ala His Gln Pro Lys Leu Glu Met Ala Ser Ala Val  
 35 40 45

Thr Ile Ser Ser Val Ser Ala Gln Ala Ala Leu Val Ser Lys Pro Arg  
 50 55 60

Asn His Gly Ser Thr Ser Tyr Ser Gly Leu Lys Ala Ser Ser Ser Ser  
 65 70 75 80

Ile Ser Phe Glu Ser Gly Thr Ser Phe Leu Gly Lys Thr Ala Ser Leu  
 85 90 95

Arg Ala Thr Ile Thr Ser Arg Ile Val Pro Lys Ala Lys Ser Gly Ser  
 100 105 110

Gln Ile Ser Pro Gln Ala Ser Tyr Lys Val Ala Val Leu Gly Ala Ala  
 115 120 125

Gly Gly Ile Gly Gln Pro Leu Gly Leu Leu Ile Lys Met Ser Pro Leu  
 130 135 140



Val Ser Glu Leu Arg Leu Tyr Asp Ile Ala Asn Val Lys Gly Val Ala  
 145 150 155 160  
 Ala Asp Leu Ser His Cys Asn Thr Pro Ser Gln Val Met Asp Phe Thr  
 165 170 175  
 Gly Pro Ala Glu Leu Ala Asp Cys Leu Lys Gly Val Asp Val Val Val  
 180 185 190  
 Ile Pro Ala Gly Val Pro Arg Lys Pro Gly Met Thr Arg Asp Asp Leu  
 195 200 205  
 Phe Asn Ile Asn Ala Gly Ile Val Lys Ser Leu Ile Glu Ala Val Ala  
 210 215 220  
 Asp Asn Cys Pro Glu Ala Phe Ile His Ile Ile Ser Asn Pro Val Asn  
 225 230 235 240  
 Ser Thr Val Pro Ile Ala Ala Glu Ile Leu Lys Gln Lys Gly Val Tyr  
 245 250 255  
 Asn Pro Lys Lys Leu Phe Gly Val Ser Thr Leu Asp Val Val Arg Ala  
 260 265 270  
 Asn Thr Phe Val Ala Gln Lys Lys Asn Leu Ser Leu Ile Asp Val Asp  
 275 280 285  
 Val Pro Val Val Gly Gly His Ala Gly Ile Thr Ile Leu Pro Leu Leu  
 290 295 300  
 Ser Lys Thr Arg Pro Ser Val Ser Phe Thr Asp Glu Glu Thr Glu Gln  
 305 310 315 320  
 Leu Thr Lys Arg Ile Gln Asn Ala Gly Thr Glu Ala Val Glu Ala Lys  
 325 330 335  
 Ala Gly Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala Ala Ala Arg  
 340 345 350  
 Phe Val Glu Ser Ser Leu Arg Ala Met Ala Gly Asp Pro Asp Val Tyr  
 355 360 365  
 Glu Cys Thr Tyr Val Gln Ser Glu Leu Thr Glu Leu Pro Phe Phe Ala  
 370 375 380  
 Ser Arg Val Lys Leu Gly Lys Asp Xaa Val Glu Ser Ile Ile Ser Ser  
 385 390 395 400

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 gttggagatg gcatcagctg ttaccatcag ctcagtcagc gcgcaggccg ctttggtctc 180  
 gaaaccaagg aatcatggca gcacaagcta cagtggccta aaggcatcat catcgctgat 240  
 cagcttcgaa tcagggacat cattcctggg caagaccacc tctcttcggg cgactatcac 300  
 ctcaaggatt gtgccaaagg caaagtctgg gtctcagata tcacctcagg cctcgtacaa 360  
 ggtggcggtg cttggtgctg acggtggcat cgggtcaacca ctgggcctgc tgatcaagat 420  
 gtctcctctg gtctcagagc tgcgcctgta tgatattgac aatgtcaagg gagtcgctgc 480  
 agatctcagn cactgcaaca cgccttctca ggtcatggac ttactggcc cagcagaact 540  
 agctgactgc ttgaaaggtg ttgatgttgt cgncatccct gcgggtgtnc caaggaagcc 600  
 agncatgacc cgtgatgacc tttttaacat caatgcgggc atcgnaagt cgcttattga 660  
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agtcagcgcg caggccgctt tggctctgaa accaaggaat catggcagca caagctacag 180

tggcctaaag gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa 240

gaccgcctct cttcggggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc 300

tcagatatca cctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg 360

tcaaccactg ggcctgctga tcaagatgtc tcctctgggtc tcagagctgc gcctgtatga 420

tattgccaat gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt 480

catggacttc actggcccag cagaactagc tgactgcttg aaaggtgttg atgttgctcg 540

catccctgcg ggtgtcccaa ggaagccagg catgaccctg gatgaccttt ttaacatcaa 600

tgcgggcatc gtcaagtcgc ttattgaggc tgttgcagac aactgcc 647

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 cggtcagcgc gcagtccgct ctggtttcga aaccaaggaa tcatggcagc acgagcttcg 180  
 gtggcctaaa ggcatcatcg gcgtcgatca gctttgaatc agggacatcg ttcctgggca 240  
 agactgcctc cctccgggcg actgttacct caaggattgt gccaaaggca aagtctgggt 300  
 ctgagatata gcctcaggca tcttacaagg tggcgggtgct tgggtgctgct ggtggcatcg 360  
 gccaaacctt gggcctgctg atcaagatgt ctctctagt ctgagagctg cgcctgtatg 420  
 atattgccaa tgtcaagggc gtcgctgcag atcttagcca ctgcaacacg ccttctcagg 480  
 tcatggactt cactggcccc gcggaactag ccgactgctt gaaaggtgtg gatgttgtcg 540  
 tcatccctgc ggggtgtcca aggaagcctg gcatgactcg tgatgacctt tttaacatca 600  
 atgcgggcat cgtcaagtcg cttatcgagg ctgttgacga caactgccct gaggccttca 660  
 tccatatcat cagcaacccg gtcaactcca cggtgccgat tgctgctgag attctgaaac 720  
 agaagggcgt ctacaacccc aagaagctct tcgggggttn caccctggat gttgtcagag 780  
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 caattcccat ctgctcacca acccaagttg gagatggcat cagctgttac catcagctca 120  
 gtcagcgcg caggccgcttt ggtctcgaaa ccaaggaatc atggcagcac aagctacagt 180  
 ggcctaaagg catcatcatc gtcgatcagc ttcgaatcag ggacatcatt cctgggcaag 240  
 accgcctctc ttcggggcgac tatcacctca aggattgtgc caaaggcaaa gtctgggtct 300  
 cagatatcac ctcaggcctc gtacaagggtg gcggtgcttg gtgctgccgg tggcatcggt 360  
 caaccactgg gcctgctgat caagatgtct cctctggtct cagagctgcg cctgtatgat 420  
 attgccaatg tcaagggagt cgctgcagat ctcagccact gcaacacgcc ttctcaggtc 480  
 atggacttca ctggcccagc agaactagct gactgcttga aagggtgttga tggtgtcgtc 540  
 atccctgcgg gtgtctcaag gaagccaggc atgacccttg atgacctttt taacatcaat 600  
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gcaattccca tctgctcacc aaccaagtt ggagatggca tcagctgtta ccatcagctc 120  
agtcagcgcg caggccgctt tgggtctcga accaaggaat catggcagca caagctacag 180  
tggcctaaag gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa 240  
gaccgcctct cttcgggcca ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc 300  
tcagatatca ctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg 360  
tcaaccactg ggcctgctga tcaagatgtc tcctctgggtc tcagagctgc gcctgtatga 420  
tattgccaat gtcaaggag tgcgtgcaga tctcagccac tgcaacacgc cttctcaggt 480  
catggacttc actggcccag cagaactagc tgactgcttg aaagggtgttg atgttgtcgt 540  
catccctgcg ggtgtcccaa ggaagccagg cacgaccgt gatgaccttt ttaacatcaa 600  
tgcgggcatc gtcaagtcgc ttattgaggc tgttgcagac aactgccctg aggccctcat 660  
ccatatcatc agcaaccgg tcaactncac tgtga 695

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caattcccat ctgctcacca acccaagttg gacatggcat cagctgttac catcagttcg 120

gtcagcgcgc agtccgctct ggtttcgaaa ccaaggaatc atggcagcac gagcttcggt 180

ggcctaaagg catcatcggc gtcgatcagc tttgaatcag ggacatcggt cctgggcaag 240

actgcctccc tccgggcgac tgttaccca aggattgngc caaaggcaaa gtctgggtct 300

canatatcgc ctcaggcatc ttacaaggng gcggtgcttg gtgctgctgg tggcatcggt 360

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 attcccatct gctcaccaac ccaagttgga gatggcatca gctgttacca tcagctcagt 120  
 cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat ggcagcacia gctacagtgg 180  
 cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac 240  
 cgcctctctt cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca 300  
 gatatcacct caggcctcgt acaaggtggc ggtgcttggg gctgccgggtg gcatcgggtca 360  
 accactgggc ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat 420  
 tgccaatgtc aaggggagtcg ctgcagatct cagccactgg aacacgcctt ctcaggtcat 480  
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aattcccatc tgctcaccaa cccaagttgg agatggcatc agctgttacc atcagctcag 120  
tcagcgcgca ggccgctttg gtctcgaaac caaggaatca tggcagcaca agctacagtg 180  
gcctaaaggc atcatcatcg tcgacagct tcgaatcagg gacatcattc ctgggcaaga 240  
ccgcctctct tcgggcgact atcacctcaa ggattgtgcc aaaggcaaag cctgggtctc 300  
agatatcacc tcaggcctcg tacaaggtgg cggtgcttgg tgctgccggt ggcacggtc 360  
aaccactggg cctgctgacg aagatgtctc ctctgggtctc agagctgcgc ctgtatgata 420  
ttgccaatgt caagggagtc gctgcagatc tcagccactg caacacgcct tctcaggtca 480  
tggacttcac tggccagca gaactagctg actgcttgaa aggtgttgat gttgtcgtca 540  
tccctgcggg tgtcccaagg aagccaggca tgaccctga tgacctttt aacatcaatg 600  
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<212> DNA  
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 <223> n is a, c, g, or t

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 aattcccatc tgctcaccaa cccaagttgg agatggcatc agctgttacc atcagctcag 120  
 tcagcgcgca ggccgctttg gtctcgaaac caaggaatca tggcagcaca agctacagtg 180  
 gcctaaaggc atcatcatcg tcgatcagct tcgaatcagg gacatcattc ctgggcaaga 240  
 ccgcctctct tcgggcgact atcacctcaa ggattgtgcc aaaggcaaag tctgggtctc 300  
 agatatcacc tcaggcctcg tacaaggtgg cggtgcttgg tgctgccggt ggcacggtc 360  
 aaccactggg cctgctgatc aagatgtctc ctctgggtctc agagctgctc ctgtatgata 420  
 ttgccaatgt caagggagtc gctgcagatc tcagccactg caacacgcct tctcaggtca 480  
 tggacttcac tggcccagca gaactagctg gctgcttgaa aggtgttgat gttgtcgtca 540  
 tccctgcggg tgtccaagg aagccaggca tgaccctgta tgaccttttt aacatcaatg 600  
 cgggcatcgt caagtcgctt attgaggctg ttgcagacaa ctgccctgag gccttcatcc 660  
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<210> 126  
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 <213> Lolium perenne

<220>  
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cagcgcgcag gccgcttttg tctcgaaacc aaggaatcat ggcagcaciaa gctacagtgg 180  
cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac 240  
cgcctctctt cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca 300  
gatatcacct caggcctcgt acaaggtggc ggtgcttggt gctgccggtg gcatcgggtca 360  
accactgggc ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat 420  
tgccaatgtc aaggggagtcg ctgcagatct cagccactgc aacacgcctt ctcagggtcat 480  
ggacttcact ggcccagcag aactagctga ctgcttgaaa ggtgttgatg ttgtcgtcat 540  
ccctgcgggt gtcccaagga agccaggcat gaccctgat gaccttttta acatcaatgc 600  
gggcatcgtc aagtcgctta ttgaggctgt tgcagacaac tgccctgagg ccttcatcca 660  
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<213> Lolium perenne

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<223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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 agcgcgcagt ccgctctggt ttcgaaacca aggaatcatg gcagcacgag cttcggtggc 180  
 ctaaaggcat catcggcgtc gatcagcttt gaatcagga catcggttctt gggcaagact 240  
 gnctccctcc gggcgactgt taccccaagg attgtgcaa aggcaaagtc tgggtctcag 300  
 atatcgctc aggcatttta caaggtggcg gtgcttggtg ctgctggtg catcggtcaa 360  
 ccactgggcc tgctgatcaa gatgtctcct ctggtctcag agctgcgctt gtatgatatt 420  
 gccaatgtca agggcgctgc tgcagatctt agccactgca acacgccttc tcaggatcag 480  
 gacttcactg gccccgcgga actagccgac tgcttgaaag gtgtggatgt tgtcgtcatc 540  
 cctgcgggtg tccaaggaa gcctggcatg actcgtgatg accttttta catcaatgcy 600  
 ggcacgtca agtcgcttat cgaggctgtt gcagacaact gccctgagga cttcatccat 660  
 atcatcagca acccggtcaa ctccacggtg ccgattgctg ctgagattct gaaacagaag 720  
 ggcgtntaca accccaagaa gctcttcggg gtttcaccc tggatgttgt cagagctaac 780  
 acatttgtag ctcaaaanaa na 802

<210> 128  
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<220>  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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 cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat ggcagcaca gctacagtgg 180  
 cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac 240  
 cgcctctctt cgggcgacta tcacctcaag gattgtgcc aaggcaaagt ctgggtctca 300  
 gatatcacct caggcctcgt acaaggtggc ggtgcttggg gctgccggtg gcatcggtca 360  
 accactgggc ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat 420  
 tgccaatgtc aagggagtcg ctgcagatct cagccactgc aacacgcctt ctcaggatcat 480  
 ggacttcact ggcccagcag aactagctga ctgcttgaaa ggtgttgatg ttgtcgtcat 540  
 ccctgcgggg gtcccaagga agccaggcat gaccctgat gaccttttta acatcaatgc 600  
 gggcatcgtc aagtcgctta ttgaggctgt tgcagacaac tgccctgagg ccttcatnca 660  
 tatcatcagc aaccgggtca actncactgt g 691

<210> 129  
 <211> 705  
 <212> DNA  
 <213> Lolium perenne

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 ttcccatctg ctaccaacc caagttggag atggcatcag ctgttaccat cagctcagtc 120  
 agcgcgcagg ccgctttggt ctcgaaacca aggaatcatg gcagcacaag ctacagtggc 180  
 ctaaaggcat catcatcgtc gatcagcttc gaatcangga catcattcct gggcaagacc 240  
 gcctctcttc gggcgactat cacctcaagg attgtgccaa aggcaaagtc tgggtctcag 300  
 atatcacctc aggcctcgta caaggtggcg gtgcttggtg ctgccggtgg catcgggtcaa 360  
 ccactgggcc tgctgatcaa gatgtctcct ctggtctcag agctgcgctt gtatgatatt 420  
 gccaatgtca agggagtcgc tgcagatctc agccactgca acacgccttc tcaggatcatg 480  
 gacttcactg gccagcaga actagctgac tgcttgaaag gtgttgatgt tgtcgtcatc 540  
 cctgcgggtg tctcaaggaa gccaggcatg acccgtgatg acctttttaa catcaatgcg 600  
 ggcatcgtca agtcgcttat tgaggctgnt gcagacaact gccctgaggc cttcatccat 660  
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<210> 130  
 <211> 680

<212> DNA  
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<220>  
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>  
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<223> n is a, c, g, or t

<220>  
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<223> n is a, c, g, or t

<400> 130  
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gcgcgcaggc cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc 180  
taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg 240  
cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggcttcaga 300  
tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcgggtcaac 360  
cactgggcct gctgatcaag atgtctcctc tggcttcaga gctgcgcctg tatgatattg 420  
ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg 480  
acttcactgg cccagcagaa ctagctgact gcttgaaagg tggtgatgtt gtcgtcatcc 540  
ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg 600  
gcatcgtcaa gtcgcttatt gaggtgttg cagacaactg ccctgaggcc ttcattcata 660  
tcattcagcaa cccggtcacn 680



<210> 131  
 <211> 705  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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<220>  
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 <222> (28)..(28)  
 <223> n is a, c, g, or t

<400> 131  
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 cgcgcaggcc gctttggtct cgaaaccaag gaatcatggc agcacaagct acagtggcct 180  
 aaaggcatca tcattcgtcga tcagcttcga atcagggaca tcattcctgg gcaagaccgc 240  
 ctctcttcgg gcgactatca cctcaaggat tgtgccaaag gcaaagtctg ggtctcagat 300  
 atcacctcag gcctcgtaca aggtggcggt gcttggtgct gccgggtggca tcggtcaacc 360  
 actgggcctg ctgatcaaga tgtctcctct ggtctcagag ctgcgcctgt atgatattgc 420  
 caatgtcaag ggagtcgctg cagatctcag ccactgcaac acgccttctc aggtcatgga 480  
 cttcactggc ccagcagaac tagctgactg cttgaaaggt gttgatgttg tcgtcatccc 540  
 tgcgggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca tcaatgcggg 600  
 catcgtcaag tcgcttattg aggtctgttg agacaactgc cctgaggcct tcatccatat 660  
 catcagcaac ccggtcaact ccactgtgcc gattgctgct gagat 705

<210> 132  
 <211> 706  
 <212> DNA  
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<220>  
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<220>  
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<220>  
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 <222> (21)..(21)  
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 <222> (27)..(27)  
 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>  
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 <222> (681)..(681)  
 <223> n is a, c, g, or t

<400> 132  
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 cccatctgct caccaacca agttggagat ggcacagct gttaccatca gctcagtcag 120  
 cgcgcaggcc gctttggtct cgaaaccaag gaatcatggc agcacaagct acagtggcct 180  
 aaaggcatca tcatcgctga tcagcttcca atcagggaca tcattcctgg gcaagaccgc 240  
 ctctcttcgg gcgactatca cctcaaggat tgtgccaaag gcaaagtctg ggtctcagat 300  
 atcacctcag gcctcgtaca aggtggcggt gcttggtgct gccggtggca tcggtcaacc 360  
 actgggcctg ctgatcaaga tgtctcctct ggtctcagag ctgcgcctgt atgatattgc 420  
 caatgtcaag ggagtcgctg cagatctcag ccaactgcaac acgccttctc aggtcatgga 480  
 cttcactggc ccagcagaac tagctgactg cttgaaaggt gttgatgttg tcgtcatccc 540  
 tgcgggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca tcaatgcggg 600  
 catcgtcaag tcgcttattg aggctgntgc agacaactgc cctgaggcct tcatccatat 660  
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<210> 133  
 <211> 634  
 <212> DNA  
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<220>  
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<220>  
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<222> (26)..(27)  
<223> n is a, c, g, or t

<220>  
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<222> (87)..(87)  
<223> n is a, c, g, or t

<400> 133  
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ccatctgctc accaacccaa gttgggnatg gcatcagctg ttaccatcag ctgagtcagc 120  
gcgaggccg ctttgggtctc gaaaccaagg aatcatggca gcacaagcta cagtggccta 180  
aaggcatcat catcgctgat cagcttcgaa tcagggacat cattcctggg caagaccgcc 240  
tctcttcggg cgactatcac ctcaaggatt gtgccaaagg caaagtctgg gtctcagata 300  
tcacctcagg cctcgtacaa ggtggcggtg cttggtgctg ccggtggcat cgggtcaacca 360  
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aatgtcaagg gagtcgctgc agatctcagc cactgcaaca cgccttctca ggtcatggac 480  
ttcactggcc cagcagaact agctgactgc ttgaaagggtg ttgatgttgt cgatcatccct 540  
gcggggtgtcc caaggaagcc aggcattgacc cgtgatgacc tttttaacat caatgcgggc 600  
atcgtcaagt cgcttattga ggctgttgca gaca 634

<210> 134  
<211> 758  
<212> DNA  
<213> Lolium perenne

<220>  
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<223> n is a, c, g, or t

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gcgcgaggc cgccttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc 180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg	240
cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggcttcaga	300
tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcgggtcaac	360
cactgggcct gctgatcaag atgtctcctc tggcttcaga gctgcgcctg tatgatattg	420
ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct cagggtcatgg	480
acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc	540
ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg	600
gcatcgtaa gtcgcttatt gaggtgttg cagacaactg ccctgaggcc ttcattcata	660
tcattcagcaa cccggtcaac tccactgtgc cgattgtgc tgagattctg aaacagaagg	720
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<210> 135  
 <211> 761  
 <212> DNA  
 <213> Lolium perenne

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 <223> n is a, c, g, or t

<220>  
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<220>  
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 <222> (628)..(628)  
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<220>  
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 <222> (704)..(704)  
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<220>

<221> misc\_feature  
 <222> (716)..(716)  
 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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<220>  
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 <222> (754)..(754)  
 <223> n is a, c, g, or t

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 gcgcgcaggc cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc 180  
 taaaggcatc atcatcgctg atcagcttcg aatcagggac atcattcctg ggcaagaccg 240  
 cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggctctcaga 300  
 tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcgggtcaac 360  
 cactgggcct gctgatcaag atgtctcttc tggctctcaga gctgcgcctg tatgatattg 420  
 ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct cagggtcatgg 480  
 acttactggt cccagctgaa ctagctgact gcttgaaagg tggtgatggt gtcgtcatcc 540  
 ctgcggtgtg cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg 600  
 gcatcgncaa gtcgcttatt gaggtgntg cagacaactg ccctgaggcc ttcattcata 660  
 tcatcagcaa cccggncaac tccactgngc cgattgctgc tganattctg aaacanaagg 720  
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<210> 136  
 <211> 772  
 <212> DNA  
 <213> Lolium perenne

<220>

<221> misc\_feature  
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<223> n is a, c, g, or t

<220>  
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<223> n is a, c, g, or t

<400> 136  
gnaccagaaa aagaaaaaag agccagnncg caagggggcga gccgggggcgc acgcagcaat 60  
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gcgcgcaggc cgctttgggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc 180  
taaaggcatc atcatcgtcg atcagcttcg aatcaggggac atcattcctg ggcaagaccg 240  
cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct ggggtctcaga 300  
tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcgggtcaac 360  
cactgggcct gctgatcaag atgtctctc tggtctcaga gctgcgcctg tatgatattg 420  
ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct cagggtcatgg 480  
acttcaactg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc 540  
ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg 600  
gcatcgtaa gtcgcttatt gaggtgttg cagacaactg ccctgaggcc ttcattcata 660  
tcacagcaa cccggtcaac tccactgtgc cgattgctgc tgagattctg aaacagaagg 720  
gcgtctacaa cccaagaag ctcttcgggg tttccaccct ggatgttgtc aa 772

<210> 137  
<211> 772  
<212> DNA  
<213> Lolium perenne

<220>  
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<223> n is a, c, g, or t

<220>  
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<222> (27)..(28)  
<223> n is a, c, g, or t

<220>  
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<222> (772)..(772)  
<223> n is a, c, g, or t

<400> 137  
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gcgcgcaggc cgctttgggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc 180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg	240
cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct ggggtctcaga	300
tatcacctca ggcctcgtac aagggtggcgg tgcttggtgc tgccggtggc atcgggtcaac	360
cactgggcct gctgatcaag atgtctcctc tgggtctcaga gctgcgccctg tatgatattg	420
ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct cagggtcatgg	480
acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc	540
ctgcggtgtg cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg	600
gcatcgtaa gtcgcttatt gaggtgttg cagacaactg ccctgaggcc ttcattcata	660
tcattcagaa cccggtcaac tccactgtgc cgattgtgc tgagattctg aaacagaagg	720
gcgtctacaa cccaagaag ctcttcgggg tttccaccct ggatgttgtc an	772

<210> 138  
 <211> 807  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (27)..(28)  
 <223> n is a, c, g, or t

<220>  
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 <222> (794)..(794)  
 <223> n is a, c, g, or t

<400> 138	
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gcgcgaggc cgccttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc	180
taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg	240
cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct ggggtctcaga	300
tatcacctca ggcctcgtac aagggtggcgg tgcttggtgc tgccggtggc atcgggtcaac	360
cactgggcct gctgatcaag atgtctcctc tgggtctcaga gctgcgccctg tatgatattg	420
ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct cagggtcatgg	480
acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc	540
ctgcggtgtg cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg	600

gcatcgtcaa gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcattccata	660
tcattcagcaa cccggtcaac tccactgtgc cgattgctgc tgagattctg aaacagaagg	720
gcgtctacaa cccaagaag ctcttcgggg tttccaccct ggatgttgtc agagctaaca	780
catttgtagc tcanaagaag aacctca	807

<210> 139  
 <211> 628  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <222> (26)..(27)  
 <223> n is a, c, g, or t

<400> 139	
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cgcaggccgc tttggtctcg aaaccaagga atcatggcag cacaagctac agtggcctaa	180
aggcaccatc atcgtcgatc agcttcgaat caggacatc attcctgggc aagaccgcct	240
ctcttcgggc gactatcacc tcaaggattg tgccaaaggc aaagtctggg tctcagatat	300
cacctcaggc ctcgtacaag gtggcggtgc ttggtgctgc cgggtggcatc ggtcaaccac	360
tgggcctgct gatcaagatg tctcctctgg tctcagagct gcgcctgtat gatattgcc	420
atgtcaaggg agtcgctgca gatctcagcc actgcaacac gccttctcag gtcattggact	480
tcactggccc agcagaacta gctgactgct tgaaagggtg tgatgttgtc gtcattcctg	540
cgggtgtccc aaggaagcca ggcattgaccc atgatgacct ttttaacatc aatgcgggca	600
tcgtcaagtc gcttattgag gctgttgc	628



<210> 140  
 <211> 640  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (3)..(3)  
 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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 <222> (12)..(12)  
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<220>  
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 <222> (18)..(19)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (26)..(27)  
 <223> n is a, c, g, or t

<400> 140  
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 cgcaggccgc tttggtctcg aaaccaagga atcatggcag cacaagctac agtggcctaa 180  
 aggcattcatc atcgtcgatc agcttcgaat caggagacatc attcctgggc aagaccgcct 240  
 ctcttcgggc gactatcacc tcaaggattg tgccaaaggc aaagtctggg tctcagatat 300  
 cacctcaggc ctctgacaag gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac 360  
 tgggcctgct gatcaagatg tctcctctgg tctcagagct gcgcctgtat gatattgcca 420  
 atgtcaaggg agtcgctgca gatctcagcc gctgcaacac gccttctcag gtcattggact 480  
 tactggccc agcagaacta gctgactgct tgagaggtgt tgatgttgtc gtcattccctg 540  
 cgggtgtccc aaggaagcca ggcattgacc gtgatgacct ttttaacatc aatgcgggca 600  
 tcgtcaagtc gcttattgag gctgttgacg acaactgccc 640

<210> 141  
 <211> 698  
 <212> DNA  
 <213> Lolium perenne

<220>  
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<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (5)..(6)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (18)..(19)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (25)..(25)

<223> n is a, c, g, or t

<400> 141

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catctgctca ccaaccceaag ttggagatgg catcagctgt taccatcagc tcagtcagcg 120

cgcaggccgc tttggtctcg aaaccaagga atcatggcag cacaagctac agtggcctaa 180

aggcatcatc atcgtcgatc agcttcgaat caggacatc attcctgggc aagaccgcct 240

ctcttcgggc gactatcacc tcaaggattg tgccaaaggc aaagtctggg tctcagatat 300

cacctcaggc ctcgtacaag gtggcggtgt ttggtgctgc cgggtggcatc ggtcaaccac 360

tgggcctgct gatcaagatg tctcctctgg tctcagagct gcgcctgtat gatattgcc 420

atgtcaaggg agtcgctgca gatctcagcc actgcaacac gccttctcag gtcattggact 480

tcactggccc agcagaacta gctgactgct tgaaagggtgt tgatgttgtc gtcattccctg 540

cgggtgtccc aaggaagcca ggcattgaccc gtgatgacct ttttaacatc aatgcgggca 600

tcgtcaagtc gcttattgag gctgttgacg acaactgccc tgaggccttc atccatatca 660

tcagcaaccc ggtcaactcc actgtgccga ttgctgct 698

<210> 142

<211> 713

<212> DNA

<213> Lolium perenne

<220>

<221> misc\_feature

<222> (3)..(3)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (5)..(6)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (18)..(19)

<223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <222> (26)..(26)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (627)..(627)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (655)..(655)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (681)..(681)  
 <223> n is a, c, g, or t

<220>  
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 <222> (713)..(713)  
 <223> n is a, c, g, or t

<400> 142  
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 cccatctgct caccaacca agttggagat ggcacagct gttaccatca gctcagtcag 120  
 cgcgcaggcc gctttgatct cgaaaccaag gaatcctggc agcacaagct acagtggcct 180  
 aaaggcatca tcatcgctga tcagcttcga atcagggaca tcattcctgg gcaagaccgc 240  
 ctctcttcgg gcgactatca cctcaaggat tgtgccaaag gcaaagtctg ggtctcagat 300  
 atcacctcag gcctcgtaca aggtggcggt gcttggtgct gccggtggca tcggtcaacc 360  
 actgggcctg ctgatcaaga tgtctcctct ggtctcagag ctgcgctgt atgatattgc 420  
 caatgtcaag ggagtcgctg cagatctcag ccaactgcaac acgccttctc aggtcatgga 480  
 cttcactggc ccagcagaac tagctgactg cttgaaaggt gttgatgttg tcgtcatccc 540  
 tgcgggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca tcaatgcggg 600  
 catcgtcaag tcgcttattg aggctgntgc agacaactgc cctgaggcct tcatncatat 660  
 catcagcaac ccggtcaact nactgtgcc gattgctgct gagattctga aan 713

<210> 143  
 <211> 771  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature

<222> (26)..(26)

<223> n is a, c, g, or t

<400> 143

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ccatctgctc accaacccea gttggagatg gcatcagctg ttaccatcag ctcaagtcagc      120
gcgagaggccg ctttggtctc gaaaccaagg aatcatggca gcacaagcta cagtggccta      180
aaggcatcat catcgtcgat cagcttcgaa tcaggagcat cattcctggg caagaccgcc      240
tctcttcggg cgactatcac ctcaaggatt gtgccaaagg caaagtctgg gtctcagata      300
tcacctcagg cctcgtacaa ggtggcggtg cttggtgctg ccggtggcat cggtaacca      360
ctgggcctgc tgaccaagat gtctcctctg gtctcagagc tgcgcctgta tgatattgcc      420
aatgtcaagg gagtcgctgc aggtctcagc cactgcaaca cgccttctca ggtcatggac      480
ttcactggtc cagcagaact agctgactgc ttgaaagggt ttgatgttgt cgtcatccct      540
gcgggtgtcc caaggaagcc aggcattgac cgtgatgacc tttttaacat caatgcgggc      600
atcgtcaagt cgcttattga ggctgttgca gacaactgcc ctgaggcctt catccatatc      660
atcagcaacc cggtaactc cactgtgccg attgctgctg agattctgaa acagaagggc      720
gtctacaacc ccaagaagct cttcggggtt tccaccctgg atgttgtcag a              771
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<210> 144

<211> 773

<212> DNA

<213> *Lolium perenne*

<220>

<221> misc\_feature

<222> (26)..(27)

<223> n is a, c, g, or t

<400> 144

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cgcgaggcc gctttggtct cgaaaccaag gaatcatggc agcacaagct acagtggcct      180
aaaggcatca tcattcgtga tcagcttcga atcagggaca tcattcctgg gcaagaccgc      240
ctctcttcgg gcgactatca cctcaaggat tgtgccaaag gcaaagtctg ggtctcagat      300
atcacctcag gcctcgtaca aggtggcggt gcttggtgct gccggtggca tcggtcaacc      360
actgggcctg ctgatcaaga tgtctcctct ggtctcagag ctgagcctgt atgatattgc      420
caatgtcaag ggagtcgctg cagatctcag cactgcaac acgccttctc aggtcatgga      480
cttactggc ccagcagaac tagctgactg cttgaaagggt gttgatgttg tcgtcatccc      540
tgcggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca tcaatgcggg      600
catcgtcaag tcgcttattg aggtgttgc agacaactgc cctgaggcct tcatccatat      660
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catcagcaac ccggtcaact ccactgtgcc gattgctgct gagattctga aacagaaggg	720
cgtctacaac cccaagaagc tcttcggggg ttccaccctg gatgttgta gag	773

<210> 145  
 <211> 684  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (2)..(3)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (9)..(9)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (16)..(17)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (22)..(22)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (545)..(545)  
 <223> n is a, c, g, or t

<400> 145	
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ctgctcacca acccaagttg gggatggcat cagctgttac catcagctca gtcagcgcg	120
aggccgcttt ggtctcgaaa ccaaggaatc atggcagcac aagctacagt ggcctaaagg	180
catcatcatc gtcgatcagc ttcgaatcag ggacatcatt cctgggcaag accgcctctc	240
ttcgggcgac tatcacctca aggattgtgc caaaggcaaa gtctgggtct cagatatcac	300
ctcaggcctc gtacaaggtg gcggtgcttg gtgctgccgg tggcatcggt caaccactgg	360
gcctgctgat caagatgtct cctctggctc cagaactgcg cctgtatgat attgccaatg	420
tcaagggagt cgctgcagat ctcagccact gcaacacgcc ttctcaggtc atggacttcg	480
ctggcccagc agaactagct gactgcttga aaggtgttga tgttgtcgtc atccctgcgg	540
gtgtnccaag gaagccaggc atgaccctg atgacctttt taacatcaat gcgggcatcg	600
tcaagtcgct tattgaggct gttgcagaca actgccctga ggccttcac catatcatca	660
gcaaccggt caacttcact gtgc	684

<210> 146

<211> 695  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (4)..(5)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (10)..(10)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (17)..(18)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (20)..(20)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (25)..(25)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (680)..(680)  
 <223> n is a, c, g, or t

<400> 146  
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 ccatctgctc accaacccaa gttggagatg gcatcagctg ttaccatcag ctcagtcagc 120  
 gcgcaggccg ctttggtctc gaaaccaagg aatcatggca gcacaagcta cagtggccta 180  
 aaggcatcat catcgtcgat cagcttcgaa tcagggacat cattcctggg caagaccgcc 240  
 tctcttcggg cgactatcac ctcaaggatt gtgccaaagg caaagtctgg gtctcagata 300  
 tcacctcagg cctcgtacaa ggtggcggtg cttggtgctg ccggtggcat cgggtcaacca 360  
 ctgggcctgc tgatcaagat gtctcctctg gtctcagagc tgcgcctgta tgatattgcc 420  
 aatgtcaagg gagtcgctgc agatctcagc cactgcaaca cgccttctca ggtcatggac 480  
 ttactggcc cagcagaact agctgactgc ttgaaagggtg ttgatgttgt cgtcatccct 540  
 gcgggtgtcc caaggaagcc aggcattgacc cgtgatgacc tttttaacat caatgcgggc 600  
 atcgtcaagt cgcttattga ggctgttgca gacaactgcc ctgaggcctt catccatattc 660  
 atcagcaacc cgggtcaactn cactgtgccg attgt 695

<210> 147  
 <211> 695  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (3)..(4)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (9)..(10)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (16)..(17)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (23)..(23)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (624)..(624)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (678)..(678)  
 <223> n is a, c, g, or t

<400> 147  
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 atctgctcac caaccaagt tggagatggc atcagctggt accatcagct cagtcagcgc 120  
 gcaggccgct ttggtctcga aaccaaggaa tcatggcagc acaagctaca gtggcctaaa 180  
 ggcatcatca tcgtcgatca gcttcgaatc aggacatca ttcttgggca agaccgcctc 240  
 tcttcgggcg actatcacct caaggattgt gccaaaggca aagtctgggt ctcatgatatc 300  
 acctcaggcc tcgtacaagg tggcggtgct tggctgctgcc ggtggcatcg gtcaaccact 360  
 gggcctgctg atcaagatgt ctctctggt ctcatgagctg cgctgtatg atattgccaa 420  
 tgtcaaggga gtcgctgcag atctcagcca ctgcaacacg ccttctcagg tcatggactt 480  
 cactggccca gcagaactag ctgactgctt gaaagggtgt gatgttgtcg tcatccctgc 540  
 ggggtgtcca aggaagccag gcatgacccg tgatgacctt tttaacatca atgcgggcat 600  
 cgtcaagtcg cttattgagg ctgntgcaga caactgccct gaggccttca tccatatcat 660  
 cagcaaccgc gtcaactnca ctgtgccgat tgctg 695

<210> 148  
 <211> 637  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (1)..(3)  
 <223> n is a, c, g, or t

<220>  
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 <222> (9)..(9)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (15)..(16)  
 <223> n is a, c, g, or t

<220>  
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 <222> (18)..(18)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (23)..(23)  
 <223> n is a, c, g, or t

<400> 148  
 nnnaaaaana aaaannancc agnagcaagg ggcgagccgg ggcgcacgca gcaattccca 60  
 tctgctcacc aacccaagtt ggagatggca tcagctgtta ccatcagctc agtcagcgcg 120  
 caggccgctt tgggtctcga accaaggaat catggcagca caagctacag tggcctaaag 180  
 gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa gaccgcctct 240  
 cttcggggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc tcagatatca 300  
 cctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg tcaaccactg 360  
 ggcctgctga tcaagatgtc tcctctggtc tcagagctgc gcctgtatga tattgccaat 420  
 gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt catggacttc 480  
 actggcccag cagaactagc tgactgcttg aaaggtgttg atgttgctgt catccctgcg 540  
 ggtgtcccaa ggaagccagg catgaccctg gatgaccttt ttaacatcaa tgcgggcatc 600  
 gtcaagtcgc ttattgagggc tgttgcagac aactgcc 637

<210> 149  
 <211> 675  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (2)..(3)



<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (8)..(8)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (15)..(16)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (22)..(22)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (623)..(623)

<223> n is a, c, g, or t

<400> 149

annaaaaanca aaaannacca gnacgcaagg ggcgagccgg ggcgcacgca gcaattccca	60
tctgctcacc aacccaagtt ggagatggca tcagctgtta ccatcagctc aatcagcgcg	120
caggccgctt tgggtctcga accaaggaat catggcagca caagctacag tggcctaaag	180
gcacatcat cgatgatcag cttcgaatca gggacatcat tcctgggcaa gaccgcctct	240
cttcggggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc tcagatatca	300
cctcaggcct cgtacaagggt ggcgggtgctt ggtgctgccg gtggcatcgg tcaaccactg	360
ggcctgctga tcaagatgtc tcctctgggtc tcagagctgc gcctgtatga tattgccaat	420
gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt catggacttc	480
actggcccag cagaactagc tgactgcttg aaagggtgtg atgttgctgt catccctgcg	540
ggtgtcccaa ggaagccagg catgaccggt gatgaccttt ttaacatcaa tgcgggcatc	600
gtcaagtcgc ttattgaggc tgntgcagac aactgccctg aggccttcat ccatatcatc	660
agcaaccgg tcaac	675

<210> 150

<211> 764

<212> DNA

<213> Lolium perenne

<220>

<221> misc\_feature

<222> (1)..(1)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (720)..(720)

<223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (741)..(741)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (745)..(745)  
 <223> n is a, c, g, or t

<400> 150  
 nagaaaaaca aaaaagagcc agacgcaagg ggcgagccgg ggcgcacgca gcaattccca 60  
 tctgctcacc aacccaagtt ggagatggca tcagctgtta ccatcagctc agtcagcgcg 120  
 caggccgctt tgggtctcgaa accaaggaat catggcagca caagctacag tggcctaaag 180  
 gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa gaccgcctct 240  
 cttcgggcca ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc tcagatatca 300  
 cctcaggcct cgtacaaggc ggcgggtgctt ggtgctgccg gtggcatcgg tcaaccactg 360  
 ggcctgctga tcaagatgtc tcctctgggtc tcagagctgc gcctgtatga tattgccaat 420  
 gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt catggacttc 480  
 actggcccag cagaactagc tgactgcttg aaagggtgtg atgttgctcg catccctgcg 540  
 ggtgtcccaa ggaagccagg catgaccctt gatgacctt ttaacatcaa tgcgggcatc 600  
 gtcaagtcgc ttattgaggc tgttgacagc aactgccctg aggccttcat ccatatcatc 660  
 agcaaccggt tcaactccac tgtgccgatt gctgctgaga ttctgaaaca gaacggcgtn 720  
 tccaccccaa gaagcttttc ngggnttaca ccctggatgt tgcc 764

<210> 151  
 <211> 785  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (393)..(393)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (745)..(745)  
 <223> n is a, c, g, or t

<400> 151  
 cagaaaaaag aaaagcagcc agacgcaagg ggcgagcccg ggcgcacgag caattcccat 60  
 ctgctcacca acccaagttg gacatggcat cagctgttac catcagttcg gtcagcgcg 120  
 agtccgctct ggtttcgaaa ccaaggaatc atggcagcac gagcttcggt ggcctaaagg 180  
 catcatcggc gtcgatcagc tttgaatcag ggacatcggt cctgggcaag actgcctccc 240  
 tccgggagac tgttaccca aggattgtgc caaaggcaaa gtctgggtct cagatatcgc 300

ctcaggcatc ttacaaggtg gcggtgcttg gtgctgctgg tggcatcggt caaccactgg	360
gcctgctgat caagatgtct cctctggtct canagctgcg cctgtatgat attgccaatg	420
tcaagggcgt cgctgcagat cttagccact gcaacacgcc ttctcaggtc atggacttca	480
ctggccccgc ggaactagcc gactgcttga aaggtgtgga tgttgctgctc atccctgcgg	540
gtgtcccaag gaagcctggc atgactcgtg atgacctttt taacatcaat gcgggcatcg	600
tcaagtcgct tatcgaggct gttgcagaca actgccctga ggccttcatc catatcatca	660
gcaaccgggt caactccacg gtgccgattg ctgctgagat tctgaaacag aagggcgtct	720
acaaccccaa gaagctcttc ggggnttcca ccctggatgt tgtcagagct aacacatttg	780
tagct	785

<210> 152  
 <211> 706  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
 <221> misc\_feature  
 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (7)..(7)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (14)..(15)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (21)..(21)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (676)..(676)  
 <223> n is a, c, g, or t

<400> 152	
anaaaancaa aaannaccag nacgcaaggg gcgagccggg gcgcacgcag caattcccat	60
ctgctcacca acccaagttg gagatggcat cagctgttac catcagctca gtcagcgcg	120
aggccgcttt ggtctcgaaa ccaaggaatc atggcagcac aagctacagt ggcctaaagg	180
catcatcatc gtcgatcagc ttcgaatcag ggacatcatt cctgggcaag accgcctctc	240
ttcgggcgac tatcacctca aggattgtgc caaaggcaaa gtctgggtct cagatatcac	300
ctcaggcctc gtacaaggtg gcggtgcttg gtgctgccgg tggcatcggt caaccactgg	360

gcctgctgat caagatgtct cctctggtct cagagctgcg cctgtatgat attgccaatg	420
tcaagggagt cgctgcagat ctcagccact gcaacacgcc ttctcagggtc atggacttca	480
ctggcccagc agaactagct gactgcttga aagggtgttga tgttgctcgtc atccctgcgg	540
gtgtcccaag gaagccaggc atgacccgtg atgacctttt taacatcaat gcgggcatcg	600
tcaagtcgct tattgaggct gttgcagaca actgccctga ggccttcacatc catatcatca	660
gcaacccggt caactncact gtgccgattg ctgctgagat tctgaa	706

<210> 153  
 <211> 682  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (1)..(1)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (6)..(8)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (21)..(21)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (538)..(538)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (597)..(598)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (649)..(650)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (679)..(679)  
 <223> n is a, c, g, or t

<400> 153	
naacannnaa aaacaaaaaa ngggcgagcc gggg'gcgacg cagcaattcc catctgcccc	60
ccaacccaag ttggacatgg catcagctgt caccatcagt tcagtcagcg cccaggccgc	120
tctggtgtca aaaccaagga gtcatggcag cagcagcttc agtggcctga aggcacatc	180
atcgtcgatc agcttcgaat ctggaacatc attcctgggc aagactgcct ctcttcgggc	240
gtcagtcacc ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc	300

atcttacaag gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac tgggcctgct	360
gatcaagatg tcgcctctgg tctcggagct gcgcctgtat gatattgcga atgtcaaggg	420
cgtcgctgcc gatctcagcc accgcaacac gcctgctcag gtcattggact tcaactggccc	480
cgcggaacta gcagagtgtc tgaaaggcgt ggatgtttgtc gtcattccctg cgggtgtgcc	540
aaggaagcca ggcattgaccc gtgatgacct ttttaacatc aatgcggcat cgtcagngc	600
ttatcgaggc tgttcagac actgcctgag gccttatcca tattatcann acccgggact	660
gcacggtgcc gattgctgna at	682

<210> 154  
 <211> 712  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (8)..(8)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (10)..(11)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (16)..(16)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (525)..(525)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (575)..(575)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (596)..(596)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (601)..(601)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature

<222> (638)..(638)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (665)..(665)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (686)..(686)  
<223> n is a, c, g, or t

<400> 154  
gnacacanan naaaancaaa aaaggggcca gccggggcgc acacagcaat tcccatctgc 60  
ccaccaaccc aagttggaca tggcatcagc tgtcaccatc agttcagtca gcgcccaggc 120  
cgctctggtg tcaaaaccaa ggagtcattg cagcacgagc ttcagtggcc tgaaggcatc 180  
atcatcgctg atcagcttcg aatctggaac atcattcctg ggcaagactg cctctcttcg 240  
ggcgtcagtc accccgagga ttgtgccaaa ggcaaagtct gggctctcaga tatcgccctca 300  
ggcatcttac aaggtggcgg tgcttggtgc tgccgggtggc atcgggtcaac cactgggcct 360  
gctgatcaag atgtcgccctc tggcctcgga gctgcgccctg tatgatattg cgaatgtcaa 420  
gggcgctcgt gccgatctca gccactgcaa cagcctgct caggatcatg acttcactgg 480  
ccccgcggaa ctagcagagt gcttgaaagg cgtggatggt gtcgnatccc tgcgggtggt 540  
ccaaggaagc caggcatgac ccgtgatgac cttntaaca tcaatgcggg catcgncaag 600  
ncgcttatcg aggctgttgc agacaactgc cctgaggnc t gatccatat tatgagaacc 660  
ccggncaact ccacggcgcc gattgntgca gagattctga aacagaaggc gt 712

<210> 155  
<211> 644  
<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (11)..(12)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (19)..(19)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (619)..(619)  
<223> n is a, c, g, or t

<400> 155  
aaacaaaaa nnaccagna gccaaggggc gagccggggc gcacgcagca attcccatct 60  
gctcaccaac ccaagttgga gatggcatca gctgttacca tcagctcagt cagcgcgcag 120

gccgctttgg tctcgaaacc aaggaatcat ggcagcacia gctacagtgg cctaaaggca	180
tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac cgcctctctt	240
cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca gatatacct	300
caggcctcgt acaaggtggc ggtgcttggt gctgccggtg gcatcggtca accactgggc	360
ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat tgccaatgtc	420
aagggaagtcg ctgcagatct cagccactgc aacacgcctt ctcagggtcat ggacttcaact	480
ggcccagcag aactagctga ctgcttgaaa gggttgatgt tgtcgtcatc cctgcgggtg	540
tcccaaggaa gccaggcatg acccgtgatg acctttttaa catcaatgcg ggcacgtca	600
agtcgcttat tgaggctgnt gcagacaact gccctgaggc cttt	644

<210> 156  
 <211> 683  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
 <221> misc\_feature  
 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (7)..(7)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (9)..(10)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (23)..(23)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (671)..(671)  
 <223> n is a, c, g, or t

<400> 156	
gncacanann aaaaacaaaa aangggcgag ccggggcgca cgcagcaatt cccatctgcc	60
caccaacca agttggacat ggcacagct gtcacatca gttcagtcag cgcccaggcc	120
gctctggtgt caaaaccaag gagtcatggc agcacgagct tcagtggcct gaaggcatca	180
tcatcgtcga tcagcttcga atctggaaca tcattcctgg gcaagactgc ctctcttcgg	240
gcgtcagtca ccccgaggat tgtgccaaag gcaaagtctg ggtctcagat atcgccctcag	300
gcatcttaca aggtggcggg gcttggtgct gccggtggca tcggtcaacc actgggcctg	360

ctgatcaaga tgtcgctctt ggtctcggag ctgcgcctgt atgatattgc gaatgtcaag	420
ggcgtcgtcg cccgatctcag ccaactgcaac acgcctgctc aggtcatgga cttcactggc	480
cccgcggaac tagcagagtg cttgaaaggc gtggatgttg tcgtcatccc tgcgggtgtc	540
ccaaggaagc caggcatgac ccgtgatgac ctttttaaca tcaatgcggg catcgtcaag	600
tcgcttatcg aggctgttgc agacaactgc cctgaggcct tcatccatat tatcagcaac	660
ccggtcaact ncacggtgcc gat	683

<210> 157  
 <211> 695  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (3)..(3)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (8)..(8)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (10)..(11)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (17)..(17)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (24)..(24)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (550)..(550)  
 <223> n is a, c, g, or t

<400> 157	
gancccanan naaaaanaaa aaangggcga gccggggcgc acgcagcaat tcccatctgc	60
ccaccaaccc aagttggaca tggcatcagc tgtcaccatc agttcagtca gcgcccaggc	120
cgctctggtg tcaaaaccaa ggagtcattg cagcacgagc ttcagtggcc tgaaggcatc	180
atcatcgtcg atcagcttcg aatctggaac atcattcctg ggcaagactg cctctcttcg	240
ggcgtcagtc accccgagga ttgtgccaaa ggcaaagtct ggggtctcaga tatcgccctca	300
ggcatcttac aagggtggcg tgcttggtgc tgccggtggc atcgggtcaac cactgggcct	360
gctgatcaag atgtcgctc tgggtctcga gctgcgcctg tatgatattg cgaatgtcaa	420



gggcgtcgct gccgatctca gccactgcaa cacgcctgct ctggtcatgg acttcactgg	480
ccccgcggaa ctagcagagt gcttgaaagg cgtggatggt gtcgtcatcc ctgcgggtgt	540
cccaaggaan ccaggcatga cccgtgatga cttttttaac atcaatgcgg gcatcgtcaa	600
gtcgcttatc gaggctgttg cagacaactg ccctgaggcc ttcattcata ttatcagcaa	660
cccggtcaac tccacggtgc cgattgctgc agaga	695

<210> 158  
 <211> 802  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (12)..(12)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (89)..(89)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (740)..(740)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (773)..(773)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (780)..(780)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (783)..(783)  
 <223> n is a, c, g, or t

<400> 158	
gaccagaaaa angaaaaaag gggcgagccg gggcgcacgc agcaattccc atctgcccac	60
caacccaagt tggacatggc atcagctgnc accatcagtt cagtcagcgc ccaggccgct	120
ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcattcatca	180
tcgtcgatca gcttcgaatc tggaacatca ttcttgggca agactgcctc tcttcgggag	240
tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatatc gcctcaggca	300
tcttacaagg tgggtggtgct tgggtgctgct ggtggcatcg gtcaaccact gggcctgctg	360
atcaagatgt ctctctggt ctcagagctg cgcctgtatg atattgccaa tgtcaagggc	420
gtcgctgcag atcttagcca ctgcaacacg ctttctcagg tcatggactt cactggcccc	480

gcggaactag ccgactgctt gaaaggtgtg gatgttgtcg tcatccctgc ggggtgtccca	540
aggaagcctg gcatgactcg tgatgacctt tttaacatca atgcgggcat cgtcaagtcg	600
cttatcgagg ctgttgcaga caactgccct gaggccttca tccatatcat cagcaacccg	660
gtcaactcca cggtgccgat tgctgctgag attctgaaac agaagggcgt ctacaacccc	720
aagaagctct tcgggggttn caccctggat gttgtcagag ctaacacatt tgnagctcan	780
aanaagaacc tcagtcttat cg	802

<210> 159  
 <211> 637  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (4)..(4)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (10)..(11)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (18)..(19)  
 <223> n is a, c, g, or t

<400> 159	
aaanaaaan naccagnng caaggggcca gccggggcgc acgcagcaat tcccatctgc	60
tcaccaaccc aagttggaga tggcatcagc tgttaccatc agctcagtca gcgcgcaggc	120
cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc	180
atcatcgctg atcagcttcg aatcagggac atcattcctg ggcaagaccg cctctcttcg	240
ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggctctcaga tatcacctca	300
ggcctcgtag aaggtggcgg tgcttggtgc tgccggtggc atcgggtcaac cactgggcct	360
gctgatcaag atgtctcctc tggctctcaga gctgcgcctg tatgatattg ccaatgtcaa	420
gggagtcgct gcagatctca gccactgcaa cacgccttct caggatcatgg acttcactgg	480
cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc ctgcgggtgt	540
ccaaggaag ccagacaact gccctgaggc cttcatccat atcatcagca acccggtcaa	600
ctccactgtg ccgattgctg ctgagatcta aacagaa	637

<210> 160  
 <211> 686  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (3)..(3)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (11)..(12)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (18)..(18)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (673)..(673)  
 <223> n is a, c, g, or t

<400> 160  
 aanccaaaaa nnaccagnac gcagggggcg agccggggcg cacgcagcaa ttcccatctg 60  
 ctcaccaacc caagttggag atggcatcag ctgttaccat cagctcagtc agcgcgcagg 120  
 ccgctttggt ctcgaaacca aggaatcatg gcagcacaag ctacagtggc ctaaaggcat 180  
 catcatcgtc gatcagcttc gaatcaggga catcattcct gggcaagacc gcctctcttc 240  
 gggcgactat cacctcaagg attgtgcca aggcaaagtc tgggtctcag atatcacctc 300  
 aggcctcgta caaggtggcg gtgcttggtg ctgccggtgg catcggtcaa ccaactgggcc 360  
 tgctgatcaa gatgtctcct ctggtctcag agctgcgcct gtatgatatt gccaatgtca 420  
 agggagtcgc tgcagatctc agccactgca acacgccttc tcagggtcatg gacttcactg 480  
 gcccagcaga actagctgac tgcttgaaag gtgttgatgt tgtcgtcatc cctgcgggtg 540  
 tccaaggaa gccaggcatg acccgtgatg acctttttaa catcaatgcg ggcacgtcga 600  
 agtcgcttat tgaggctggt gcagacaact gccctgaggc cttcatccat atcatcagca 660  
 acccgggtcaa ctncactgtg ccgatt 686

<210> 161  
 <211> 693  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (11)..(11)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (17)..(17)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature

<222> (672)..(672)  
<223> n is a, c, g, or t

<400> 161  
aaacaaaaaa naccagnacg caaggggcgga gccggggcgc acgcagcaat tcccatctgc 60  
tcaccaaccc aagttggaga tggcatcagc tgttaccatc agctcagtca gcgcgcaggc 120  
cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc 180  
atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg cctctcttcg 240  
ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct ggggtctcaga tatcacctca 300  
ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcgggtcaac cactgggcct 360  
gctgatcaag atgtctcctc tgggtctcaga gctgcgcctg tatgatattg ccaatgtcaa 420  
gggagtcgct gcagatctca gccactgcaa cacgccttct cagggtcatgg gcttcactgg 480  
cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc ctgcgggtgt 540  
cccaaggaag ccaggcatga cccgtgatga cttttttaac atcaatgcgg gcatcgtcaa 600  
gtcgcttatt gaggtgttg cagacaactg ccctgaggcc ttcattcata tcatcagcaa 660  
cccgggtcaac tncactgtgc cgattgctgc tgc 693

<210> 162  
<211> 647  
<212> DNA  
<213> *Lolium perenne*

<220>  
<221> misc\_feature  
<222> (6)..(6)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (8)..(9)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (15)..(15)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (17)..(17)  
<223> n is a, c, g, or t

<400> 162  
cacaananna aaaananaaa aggggcgagc cggggcgcac gcagcaattc ccatctgccc 60  
accaacccaa gttggacatg gcatcagctg tcaccatcag ttcagtcagc gcccaggccg 120  
ctctgggtgtc aaaaccaagg agtcatggca gcacgagctt cagtggcctg aaggcatcat 180  
catcgtcgat cagcttcgaa tctggaacat cattcctggg caagactgcc tctcttcggg 240

cgtcagtcac	cccgaggatt	gtgccaaagg	caaagtctgg	gtctcagata	tcgcctcagg	300
catcttacia	ggtggcggtg	cttgggtgctg	ccggtggcat	cggtcaacca	ctgggcctgc	360
tgatcaagat	gtcgctctctg	gtctcggagc	tgcgcttgta	tgatattgcg	aatgtcaagg	420
gcgctcgctgc	cgatctcagc	cactgcaaca	cgcttgctca	ggatcatggac	ttcactggcc	480
ccgcggaact	agcagagtgc	ttgaaaggcg	tggatgttgt	cgatcatccct	gcgggtgtcc	540
caaggaagcc	aggcatgacc	cgtgatgacc	tttttaacat	caatgcgggc	atcgtcaagt	600
cgcttatcga	ggctgttgca	gacaactgcc	ctgaggcctt	catccat		647

<210> 163  
 <211> 661  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
 <221> misc\_feature  
 <222> (3)..(4)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (10)..(11)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (17)..(17)  
 <223> n is a, c, g, or t

<400> 163	
aannaaaaan	naccagnacg cagggggcga gccggggcgc acgcagcaat tcccatctgc 60
tcaccaaccc	aagttggaga tggcatcagc tgttaccatc agctcagtca gcgcgcaggc 120
cgctttggtc	tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc 180
atcatcgctg	atcagcttcg aatcaggac atcattcctg ggcaagaccg cctctcttcg 240
ggcgactatc	acctcaagga ttgtgccaaa ggcaaagtct gggctctcaga tatcacctca 300
ggcctcgtag	aaggtggcgg tgcttggtgc tgccgggtggc atcgggtcaac cactgggcct 360
gctgatcaag	atgtctcctc tggctctcaga gctgcgcctg tatgatattg ccaatgtcaa 420
gggagtcgct	gcagatctca gccactgcaa cagccttct caggatcatgg acttcactgg 480
cccagcagaa	ctagctgact gcttgaaagg tggtgatgtt gtcgcatcc ctgcgggtgt 540
ccaaggaag	ccaggcatga cccgtgatga ctttttaac atcaatgcgg gcacgtcaa 600
gtcgcttatt	gaggctgttg cagacaactg ccctgaggcc ttcattcata tcatcagcaa 660
c	661

<210> 164  
 <211> 640

<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (2)..(4)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (7)..(7)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (13)..(13)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (18)..(18)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (20)..(20)  
<223> n is a, c, g, or t

<400> 164  
gnnnaanaaa aanaaaanan gggcgagccg gggcgcacgc agcaattccc atctgcccac 60  
caacccaagt tggacatggc atcagctgtc accatcagtt cagtcagcgc ccaggccgct 120  
ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcacatca 180  
tcgtcgatca gcttcgaatc tggaacatca ttcttgggca agactgcctc tcttcgggcg 240  
tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatata gcctcaggca 300  
tcttacaagg tggcgggtgct tgggtgctgcc ggtggcatcg gtcaaccact gggcctgctg 360  
atcaagatgt cgcctctggt ctcggagctg cgcctgtatg atattgcgaa tgtcaagggc 420  
gtcgtgccg acctcagcca ctgcaacacg cctgctcagg tcatggactt cactggcccc 480  
gcggaactag cagagtgtt gaaaggcgtg gatgttgtcg tcatccctgc ggggtgtcca 540  
aggaagccag gcatgacccg tgatgacctt tttaacatca atgcgggcat cgtcaagtcg 600  
cttatcgagg ctgttgacaga caactgccct gaggccttca 640

<210> 165  
<211> 681  
<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (3)..(3)  
<223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (5)..(6)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (19)..(19)  
 <223> n is a, c, g, or t

<400> 165  
 canannaaaa acaaaaaaang ggcgagccgg ggcgcacgca gcaattccca tctgcccacc 60  
 aacccaagtt ggacatggca tcagctgtca ccatcagttc agtcagcgcc caggccgctc 120  
 tgggtgtcaaa accaaggagt catggcagca cgagcttcag tggcctgaag gcatcatcat 180  
 cgtcgatcag cttcgaatct ggaacatcat tcctgggcaa gactgcctct cttcgggcgt 240  
 cagtcacccc gaggattgtg ccaaaggcaa agtctgggtc tcagatatcg cctcaggcat 300  
 cttacaaggt ggcggtgctt ggtgctgccg gtggcatcgg ttaaccactg ggcctgctga 360  
 tcaagatgtc gcctctgggtc tcggagctgc gcctgtatga tattgcgaat gtcaaggggcg 420  
 tcgctgccga tctcagccac tgcaacacgc ctgctcaggt catggacttc actggccccg 480  
 cggaactagc agagtgttg aaaggcgtgg atgttgtcgt catccctgcg ggtgtcccaa 540  
 ggaagccagg catgaccctg gatgacctt ttaacatcaa tgcgggcacg gtcaagtcgc 600  
 ttatcgaggc tgttgcagac aactgccctg aggccttcat ccatattatc agcaaccg 660  
 tcaactccac ggtgccgatt g 681

<210> 166  
 <211> 741  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (2)..(2)  
 <223> n is a, c, g, or t

<400> 166  
 gnaccagaaa aagaaaaaaa ggggagccgg ggggcgcacg cagcaattcc catctgcccc 60  
 ccaaccaag ttggacatgg catctgctgt caccatcagt tcagtcagcg cccaggccgc 120  
 tctggtgtca aaaccaagga gtcatggcag cagcagcttc agtggcctga aggcatcatc 180  
 atcgtcgatc agcttcgaat ctggagcatc attcctgggc aagactgcct ctcttcgggc 240  
 gtcagtcacc ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc 300  
 atctcacaag gtggcggtgc ttggtgctgc cgggtggcatc ggtcaaccac tgggcctgct 360  
 gatcaagatg tcgcctctgg tctcggagct gcgcctgtat gatattgcga atgtcaaggg 420  
 cgtcgctgcc gatctcagcc actgcaacac gcctgctcag gtcatggact tcaactggccc 480

cgcggaacta gcagagtgct tgaaaggcgt ggatgttgct gtcacccctg cgggtgtccc	540
aaggaagcca ggcattgaccc gtgatgacct ttttaacatc aatgcgggca tcgtcaagtc	600
gcttatcgag gctgttgacg acaactgccc tgaggccttc atccatatta tcagcaaccc	660
ggtcaactcc acggtgccga ttgctgcaga gattctgaaa cagaaggcg tctacaaccc	720
caagaagctc ttcggggttt c	741

<210> 167  
 <211> 665  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (3)..(6)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (11)..(11)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (22)..(22)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (614)..(614)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (664)..(664)  
 <223> n is a, c, g, or t

<400> 167	
cannnnaaaa ncaaaaaagg gnacgagccg gggcgacgc agcaattccc atctgcccac	60
caacccaagt tggacatggc atcagctgtc accatcagtt cagtcagcgc ccaggccgct	120
ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcattcatca	180
tcgtcgatca gcttcgaatc tggaacatca ttcctgggca agactgcctc tcttcgggag	240
tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatata gcctcaggca	300
tcttacaagg tggcggtgct tgggtgctgcc ggtggcatcg gtcaaccact gggcctgctg	360
atcaagatgt cgcctctggt ctcggagctg cgctgtatg atattgcgaa tgtcaagggc	420
gtcgctgccg atctcagcca ctgcaacacg cctgctcagg tcatggactt cactggcccc	480
gcggaactag cagagtgcctt gaaaggcgtg gatgttgctg tcatccctgc ggggtgtcca	540
aggaagccag gcatgaccgc tgatgacctt ttttaacatca atgcgggcat cgtcaagtcg	600
cttatcgagg ctgntgcaga caactgccct gaggccttca tccatattat cagcaaccgc	660



<210> 168  
 <211> 680  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (3)..(3)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (5)..(6)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (12)..(12)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (14)..(14)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (19)..(19)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (667)..(667)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (680)..(680)  
 <223> n is a, c, g, or t

<400> 168  
 canannaaaa ananaaaang ggcgagccgg ggcgcacgca gcaattccca tctgcccacc 60  
 aacccaagtt ggacatggca tcagctgtca ccatcagttc agtcagcgcc caggccgctc 120  
 tgggtgtcaaa accaaggagt catggcagca cgagcttcag tggcctgaag gcatcatcat 180  
 cgtcgatcag cttcgaatct ggaacatcat tcctgggcaa gactgcctct cttcgggctg 240  
 cagccacccc gaggattgtg ccaaaggcaa agtctgggtc tcagatatcg cctcaggcat 300  
 cttacaaggt ggcggtgctt ggtgctgccg gtggcatcgg tcaaccactg ggcctgctga 360  
 tcaagatgtc gcctctgggtc tcggagctgc gcctgtatga tattgcgaat gtcaagggcg 420  
 tcgctgccga tctcagccac tgcaacacgc ctgctcaggt catggacttc actggccccg 480  
 cggaactagc agagtgtctg aaaggcgtgg atgttgctgt catccctgcg ggtgtcccaa 540

ggaagccagg catgacccgt gatgaccttt ttaacatcaa tgcgggcatc gtcaagtcgc	600
ttatcgaggc tgttgcagac aactgccctg aggccttcat ccatattatc agcaaccccg	660
tcaactncac ggtgccgatn	680

<210> 169  
 <211> 770  
 <212> DNA  
 <213> Lolium perenne

<400> 169	
gaccagaaaa agaaaaaaag gggcgagccg gggcgcacgc agcaattccc atctgcccac	60
caacccaagt tggacatggc atcagccgtc accatcagtt cagtcagcgc ccaggccgct	120
ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcacatca	180
tcgtcgatca gcttcgaatc tggaaacatca ttcctgggca agactgcctc tcttcgggcg	240
tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatata gcctcaggca	300
tcttacaagg tggcgggtgct tgggtgtgcc ggtggcatcg gtcaaccact gggcctgctg	360
atcaagatgt cgcctctggt ctcggagctg cgcctgtatg atattgcgaa tgtcaagggc	420
gtcgtgtccg atctcagcca ctgcaacacg cctgctcagg tcatggactt cactggcccc	480
gcggaactag cagagtgttt gaaaggcgtg gatgttgtcg tcatccctgc ggggtgtccca	540
aggaagccag gcatgacccg tgatgacctt ttaacatca atgcgggcat cgtcaagtcg	600
cttatcgagg ctgttgcaga caactgccct gaggccttca tccatattat cagcaacccg	660
gtcaactcca cggtgccgat tgctgcagag attctgaaac agaagggcgt ctacaacccc	720
aagaagctct tcgggggtttc caccctggat gttgtcaggg ctaacacatt	770

<210> 170  
 <211> 702  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (4)..(5)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (11)..(11)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (18)..(18)

<223> n is a, c, g, or t

<400> 170  
anannaaaaa naaaaaaangg gcgagccggg ggcacgcag caattcccat ctgcccacca 60  
acccaagttg gacatggcat cagctgtcac catcagttca gtcagcgccc aggccgctct 120  
ggtgtcaaaa ccaaggagtc atggcagcac gagcttcagt ggcctgaagg catcatcatc 180  
gtcgatcagc ttcgaatctg gaacatcatt cctgggcaag actgcctctc ttcgggcgtc 240  
agtcaccccg aggattgtgc caaaggcaaa gtctgggtct cagatatcgc ctcaggcatc 300  
ttacaaggtg gcggtgcttg gtgctgccgg tggcatcggt caaccactgg gcctgctgat 360  
caagatgtcg cctctggtct cggagctgcg cctgtatgat attgcgaatg tcaagggcgt 420  
cgctgccgat ctcagccact gcaacacgcc tgctcagggtc atggacttca ctggccccgc 480  
ggaactagca gagtgcttga aaggcgtgga tgttgtcgtc atccctgcgg gtgtcccaag 540  
gaagccaggc atgaccctg atgacctttt taacatcaat gcgggcatcg tcaagtcgct 600  
tatcgaggct gttgcagaca actgccctga ggccttcac catattatca gcaaccgggt 660  
caactccacg gtgccgattg ctgcagagat tctgaaacag ag 702

<210> 171  
<211> 777  
<212> DNA  
<213> Lolium perenne

<400> 171  
cagaaaaaga aaaaaagggg cgagccgggg cgacgcagc aattcccatc tgcccaccaa 60  
cccaagttgg acatggcatc agctgtcacc atcagttcag tcagcgcca ggccgctctg 120  
gtgtcaaaac caaggagtca tggcagcacg agcttcagtg gcctgaaggc atcatcatcg 180  
tcgatcagct tcgaatctgg aacatcattc ctgggcaaga ctgcctctct tcgggcgtca 240  
gtcaccccgga ggattgtgcc aaaggcaaaag tctgggtctc agatatcgcc tcaggcatct 300  
tacaaggtgg cggtgcttgg tgctgccggg ggcacgcgtc aaccactggg cctgctgac 360  
aagatgtcgc ctctggtctc ggagctgcgc ctgtatgata ttgcgaatgt caagggcgtc 420  
gctgccgatc tcagccactg caacacgcct gctcagggtca tggacttcac tggccccgcg 480  
gaactagcag agtgcttgaa aaggcgtggat gttgtcgtca tccctgcggg tgtcccaagg 540  
aagccaggca tgaccctgga tgacctttt aacatcaatg cgggcatcgt caagtcgctt 600  
atcgaggctg ttgcagacaa ctgccctgag gccttcaccc atattatcag caaccgggtc 660  
aactccacgg tgccgattgc tgacagagatt ctgaaacaga agggcgtcta caaccacaag 720  
aagctcttcg gggtttcccc cctggatggt gtcagggtca acacatttgt agtcaa 777

<210> 172  
<211> 707  
<212> DNA

<213> Lolium perenne

<220>

<221> misc\_feature

<222> (8)..(8)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (11)..(11)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (659)..(659)

<223> n is a, c, g, or t

<400> 172

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ttggacatgg catcagctgt caccatcagt tcagtcagcg cccaggccgc tctggtgtca	120
aaaccaagga gtcatggcag cacgagcttc agtggcctga aggcacatc atcgctgatc	180
agcttcgaat ctggaacatc attcctgggc aagactgcct ctcttcgggc gtcagtcacc	240
ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgctcaggc atcttacaag	300
gtggcggtgc ttggtgctgc cgggtggcatc ggtcaaccac tgggcctgct gatcaagatg	360
tcgcctctgg tctcggagct gcgcctgtat gatattgcga atgtcaaggg cgctcgctgcc	420
gatctcagcc actgcaacac gcctgctcag gtcatggact tctactggccc cgcggaacta	480
gcagagtgct tgaaaggcgt ggatgtttgc gtcacccctg cgggtgtccc aaggaagcca	540
ggcatgaccc gtgatgacct ttttaacatc aatgcgggca tcgtcaagtc gcttatcgag	600
gctgttgtag acaactgccc tgaggccttc atccatatta tcagcaaccc ggtcaactnc	660
acggtgccga ttgctgcaga gattctgaaa caaaaggcgt ctacaac	707

<210> 173

<211> 687

<212> DNA

<213> Lolium perenne

<220>

<221> misc\_feature

<222> (3)..(4)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (11)..(11)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (571)..(571)

<223> n is a, c, g, or t

<220>  
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 <222> (605)..(605)  
 <223> n is a, c, g, or t

<220>  
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 <222> (655)..(655)  
 <223> n is a, c, g, or t

<220>  
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 <222> (665)..(665)  
 <223> n is a, c, g, or t

<220>  
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 <222> (674)..(674)  
 <223> n is a, c, g, or t

<220>  
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 <222> (680)..(680)  
 <223> n is a, c, g, or t

<400> 173  
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 ttggacatgg catcagctgt caccatcagt tcagtcagcg cccaggccgc tctggtgtca 120  
 aaaccaagga gtcattggcag cacgagcttc agtggcctga aggcattcatc atcgctcgatc 180  
 agcttcgaat ctggaacatc attcctgggc aagactgcct ctcttcgggc gtcagtcacc 240  
 ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc atcttacaag 300  
 gtggcggtgc ttggtgctgc cgggtggcatc ggtcaaccac tgggcctgct gatcaagatg 360  
 tcgcctctgg tctcggagct gcgcccgtat gataatgcga atgtcaaggg cgtcgctgcc 420  
 gatctcagcc actgcaacac gcctgctcag gtcattggact tcaactggccc cgcggaacta 480  
 gcagagtgc tgaaggcgt ggatgctgtc gtcattccctg cgggtgtccc aaggaagcca 540  
 ggcatgacc gtgatgacct ttttaacatc natgcgggca tcgtcaagtc gcttatcgag 600  
 gctgntgcag acaactgccc tgaggccttc atccatatta tcagcaaccc ggtcnactcc 660  
 acgnggccga ttgntgcaan attttgc 687

<210> 174  
 <211> 473  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (211)..(211)  
 <223> n is a, c, g, or t

<220>

<221> misc\_feature  
 <222> (258)..(258)  
 <223> n is a, c, g, or t

<220>  
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 <222> (354)..(355)  
 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <222> (397)..(397)  
 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <222> (441)..(441)  
 <223> n is a, c, g, or t

<220>  
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 <222> (445)..(445)  
 <223> n is a, c, g, or t

<220>  
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 <222> (461)..(461)  
 <223> n is a, c, g, or t

<220>  
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 <222> (465)..(465)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (468)..(468)  
 <223> n is a, c, g, or t

<400> 174  
 caaggggcca gccggggcgc acgcagcaat tcccatctgc tcaccaaccc aagttggaga 60  
 tggcatcagc tgttaccatc agctcagtca gcgcgcaggc cgctttgggtc tcgaaaccaa 120  
 ggaatcatgg cagcacaagc tacagtggcc taaaggcatc atcatcgtcg atcagcttcg 180  
 aatcagggcc atcattcctg gacaagaccg nctctcttcg ggcgactatc acctcaagga 240  
 ttgtgccaaa ggcaaagnct ggggtctcaga tatcacctca ggcctcgtac aaggtggcgg 300  
 tgcttggtgc tgccggtggc atcgggtcaac cactgggcct gctgatcaag atgnntcctc 360  
 tgggtctcana gctgcgcttg tatgatattg ccaatgncaa gggagtcgct gcaaattctca 420

nncactgcaa cacgccttct naggncatgg acttcactgg nccancanaa cta

473

<210> 175  
<211> 642  
<212> DNA  
<213> Lolium perenne

<220>  
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<223> n is a, c, g, or t

<220>  
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<222> (9)..(10)  
<223> n is a, c, g, or t

<220>  
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<222> (38)..(38)  
<223> n is a, c, g, or t

<220>  
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<222> (478)..(478)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (641)..(641)  
<223> n is a, c, g, or t

<400> 175  
anaggggcn gcccgggagc cgcgaattcc atctgccncc accaagttgg acatggcatc 60  
agctgtacca tcagttagta ggcgccaggc cgctctggtg taaaaccaag gagtcatggc 120  
agcacgagct tcagtggcct gaaggcatca tcatcgctga tcagcttcga atctggaaca 180  
tcattcctgg gcaagactgc ctctcttcgg gcgtcagtca ccccgaggat tgtgccaag 240  
gcaaagtctg ggtctcagat atcgccctcag gcatcttaca aggtggcggt gcttggtgct 300  
gctggtggca tcggtcaacc actgggcctg ctgatcaaga tgtctcctct ggtctcagag 360  
ctgcgcctgt atgatattgc caatgtcaag ggcgtcgctg cagatcttag ccatgcaac 420  
acgccttctc aggtcatgga cttcactggc cccgcggaac tagccgactg cttgaaangt 480  
gtggatgttg tcgtcatccc tgcgggtgtc ccaaggaagc ctggcatgac tcgtgatgac 540  
ctttttaaca tcaatgcggg catcgccaag tcgcttatca aggctgttgc agacaactcc 600  
cttgaggcct tcatccatat catcagcaac ccggtcaact nc 642

<210> 176  
<211> 767  
<212> DNA  
<213> Lolium perenne

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<220>
<221> misc_feature
<222> (12)..(12)
<223> n is a, c, g, or t

<400> 176
ggagccgggg cncgcgagca attcccatct gctcaccaac ccaagttgga gatggcatca    60
gctgtttacca tcagctcagt cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat    120
ggcagcaciaa gctacagtgg cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg    180
acatcattcc tgggcaagac cgcctctctt cgggcgacta tcacctcaag gattgtgcca    240
aaggcaaagt ctgggtctca gatatcacct caggcctcgt acaagggtggc ggtgcttggt    300
gctgccggtg gcatcggtca accactgggc ctgctgatca agatgtctcc tctggctctca    360
gagctgcgcc tgtatgatat tgccaatgtc aaggggagtcg ctgcagatct cagccactgc    420
aacacgcctt ctcagggtcat ggacttcact ggcccagcag aactagctga ctgcttgaaa    480
ggtgttgatg ttgtcgtcat ccctgcgggt gtcccaagga agccaggcat gacccgtgat    540
gaccttttta acatcaatgc gggcatcgtc aagtcgctta ttgaggctgt tgcagacaac    600
tgccctgagg cttcatcca tatcatcagc aaccgggtca actccactgt gccgattgct    660
gctgagattc tgaaacagaa gggcgtctac aacccaaga agctcttcgg ggtttccacc    720
ctggatgttg tcagagctaa cacatttgta gctcagaaga agaacct                    767

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<210> 177
<211> 701
<212> DNA
<213> Lolium perenne

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<220>
<221> misc_feature
<222> (637)..(637)
<223> n is a, c, g, or t

<400> 177
gggggcgcac gcacaattcc catctgctca ccaaccatt ggagatggca tcagctgtta    60
ccatcagctc agtcagcgcg caggccgctt tgggtctcgaa accaaggaat catggcagca    120
caagctacag tggcctaaag gcatcatcat cgtcgatcag cttcgaatca gggacatcat    180
tcctgggcaa gaccgcctct cttcgggcga ctatcacctc aaggattgtg ccaaaggcaa    240
agtctgggtc tcagatatca ccccaggcct cgtacaagggt ggcgggtgctt ggtgctgccg    300
gtggcatcgg tcaaccactg ggcctgctga tcaagatgtc tcctctgggtc tcagagctgc    360
gcctgtatga tattgccaat gtcaaggag tcgctgcaga tctcagccac tgcaacacgc    420
cttctcaggt catggacttc actggcccag cagaactagc tgactgcttg aaagggtgttg    480
atgttgctgt catccctgcg ggtgtcccaa ggaagccagg catgaccctg gatgaccttt    540
ttaacatcaa tgcgggcatc gtcaagtcgc ttattgaggc tgttgcagac aactgccctg    600

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aggccttcat ccatatcatc agcaacccgg tcaactncac tgtgccgatt gctgctgaga 660  
 ttctgaaaca gaagggcgtc tacagcccca agaagctctt a 701

<210> 178  
 <211> 333  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (1)..(1)  
 <223> n is a, c, g, or t

<220>  
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 <222> (17)..(17)  
 <223> n is a, c, g, or t

<220>  
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 <222> (33)..(33)  
 <223> n is a, c, g, or t

<220>  
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 <222> (281)..(281)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (293)..(293)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (297)..(297)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (303)..(303)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (327)..(327)  
 <223> n is a, c, g, or t

<400> 178  
 ncagcagcaa ttccctnctg cccaccaacc canttggaca tggcatcagc tgtcaccatc 60  
 agttcagtca gcgcccaggc cgctctggtg tcaaaaccaa ggagtcattg cagcacgagc 120  
 ttcagtggcc tgaaggcatc atcatcgctg atcagcttcg aatctggaac atcattcctg 180  
 ggcaagactg cctctcttcg ggcgtcagtc accccgagga ttgtgccaaa ggcaaagtct 240  
 gggctctcaga tatcgctca ggcattctac aaggtggcgg ngcttggtgc tgnccgnggc 300  
 atnggccaac cactgggcct gctgatnaag atg 333

<210> 179  
<211> 630  
<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (2)..(2)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (6)..(6)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (16)..(17)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (33)..(33)  
<223> n is a, c, g, or t

<400> 179  
gncacnacat tccccnctg cccaccaacc canttggaaat ggcatcagct gtcaccatca 60  
gttcagtcag cgcccaggcc gctctggtgt caaaaccaag gagtcatggc agcacgagct 120  
tcagtggcct gaaggcatca tcatcgtcga tcagcttcga atctggaaca tcattcctgg 180  
gcaagactgc ctctcttcgg gcgtcagtca ccccgaggat tgtgccaaag gcaaagtctg 240  
ggctctcagat atcgccctcag gcatcttaca aggtggcggt gcttggtgct gccggtggca 300  
tcggtcaacc actgggcctg ctgatcaaga tgtcgcctct ggtctcggag ctgcgccctgt 360  
atgatattgc gaatgtcaag ggcgtcgctg ccgatctcag cactgcaac acgcctgctc 420  
aggtcatgga cttcactggc cccgcggaac tagcagagtg cttgaaaggc gtggatgttg 480  
tcgtcatccc tgcgggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca 540  
tcaatgcggg catcgtcaag tcgcttatcg aggtgtttgc agacaactgc cctgaggcct 600  
tcatccatat tatcagcaac ccggtcaact 630

<210> 180  
<211> 671  
<212> DNA  
<213> Lolium perenne

<220>  
<221> misc\_feature  
<222> (467)..(467)  
<223> n is a, c, g, or t

<220>

<221> misc\_feature  
 <222> (617)..(617)  
 <223> n is a, c, g, or t

<400> 180  
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 caggccgctc tggtgtcaaa accaaggagt catggcagca cgagcttcag tggcctgaag 120  
 gcatcatcat cgtcgatcag cttcgaatct ggaacatcat tcctgggcaa gactgcctct 180  
 cttcggggcgt cagtcacccc gaggattgtg ccaaaggcaa agtctgggtc tcagatatcg 240  
 cctcaggcat cttacaaggt ggcggtgctt ggtgctgccg gtggcatcgg tcaaccactg 300  
 ggcctgctga tcaagatgtc gcctctggtc tcggagctgc gcctgtatga tattgcgaat 360  
 gtcaagggcg tcgctgccga tctcagccac tgcaacacgc ctgctcaggt catggacttc 420  
 actggccccg cggaactagc agagtgcttg aaaggcgtgg atgttgncgt catccctgcg 480  
 ggtgtcccaa ggaagccagg catgaccggt gatgaccttt ttaacatcaa tgcgggcatc 540  
 gtcaagtcgc ttatcgaggc tgttgcagac aactgccctg aggccttcac ccatattatc 600  
 agcaaccggt tcaactncac ggtgccgatt gctgcagaga ttctgaaaca gaaggcgctc 660  
 tacaaccca a 671

<210> 181  
 <211> 634  
 <212> DNA  
 <213> Lolium perenne

<400> 181  
 ttggtgctgc tggtggcatc ggtcaaccac tgggcctgct gatcaagatg tctcctctcg 60  
 tctcggagct gcgcctgtat gatatcgcca atgtcaaggg agtcgctgca gatctcagcc 120  
 actgcaacac gcctgctcag gccatggact tcaactggccc cgcggaacta gcagagtgtc 180  
 tgaaaggtgt ggatgttgtc gtcattccctg cgggtgtccc aaggaagcct ggcattgactc 240  
 gtgatgacct ttttaacatc aatgcgggca tcgtcaagtc gcttattgag gctgttgag 300  
 acaactgccc agaggccttc atccatatca tcagcaaccc ggtcaactcc actgtgccga 360  
 ttgctgctga gattctgaaa cagaagggtg tctacaaccc caagaagctc ttcgggggtt 420  
 ccaccctgga tggtgtcaga gctaacacat ttgtagctca gaagaagaac ctcagcctca 480  
 tcgatgttga tgtcccagtt gtcggtggcc atgctgggat cacgattctg cctctgttgt 540  
 ccaagactag gccttctgtc agcttcacgg acgaggaaac tgaacagctg acaaagagga 600  
 tacagaacgc tgggacagag gtggtggagg cgaa 634

<210> 182  
 <211> 777  
 <212> DNA  
 <213> Lolium perenne

<220>  
 <221> misc\_feature  
 <222> (693)..(693)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (756)..(756)  
 <223> n is a, c, g, or t

<400> 182  
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 gagtgcttga aaggtgtgga tgttgtcgtc atccctgcgg gtgtcccaag gaagcctggc 120  
 atgactcgtg atgacctttt taacatcaat gcgggcatcg tcaagtcgct tattgaggct 180  
 gttgcagaca actgcccaga ggccttcata catatcatca gcaacccggt caactccact 240  
 gtgccgattg ctgctgagat tctgaaacag aaggggtgtct acaaccccaa gaagctcttc 300  
 ggggtttcca ccctggatgt tgtcagagct aacacatttg tagctcagaa gaagaacctc 360  
 agcctcatcg atgttgatgt ccagattgtc ggtggccatg ctgggatcac gattctgcct 420  
 ctgttgtcca agactaggcc ttctgtcagc ttcacggacg aggaaactga acagctgaca 480  
 aagaggatac agaacgctgg gacagaggcg gtggaggcga aggctggtgc tggctctgct 540  
 actctgtcca tggcttatgc cgctgccaga tttgttgagt catcgctccg cgcaatggct 600  
 ggtgatccag atgtttacga gtgcacgtat gttcagtctg agttaacaga gcttccattc 660  
 ttcgcgtcca gagttaagct tgggaaggac gnggttgagt ccatcatttc ctccgacctg 720  
 gagggagtga cggagtacga ggccaaggcg cttgangcat tgaaggctga gctgaag 777

<210> 183  
 <211> 414  
 <212> DNA  
 <213> Lolium perenne

<220>  
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 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (9)..(10)  
 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>  
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 <222> (405)..(405)  
 <223> n is a, c, g, or t

<220>  
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 <222> (409)..(409)  
 <223> n is a, c, g, or t

<400> 183  
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 tcatatacga ggaagtaatt attgataact gctgtatgac gctcgtgaag aaccctggta 120  
 cgtttgatgt attagtgatg ccaaattctat atggcgacat tattagtgat ctatgtgctg 180  
 gtttgatcgg aggcttgggc ctaactccca gctgcaacat tgggtgaagggt ggcatttgtc 240  
 ttgcagaggc tgtccatggc tctgcacctg atatattctgg caagaacctg gcaaacccaa 300  
 ctgctcttat gctgagtgtt gttatgatgt tgcgccactt gcaattnaac gaccaagcan 360  
 aacggatcca caatgctatc ctccagacta tcgncgaggg gaagnacana actg 414

<210> 184  
 <211> 137  
 <212> PRT  
 <213> Lolium perenne

<220>  
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 <222> (3)..(4)  
 <223> Xaa can be any naturally occurring amino acid

<220>

<221> misc\_feature  
<222> (7)..(8)  
<223> Xaa can be any naturally occurring amino acid

<220>  
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<223> Xaa can be any naturally occurring amino acid

<220>  
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<222> (115)..(115)  
<223> Xaa can be any naturally occurring amino acid

<220>  
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<222> (120)..(120)  
<223> Xaa can be any naturally occurring amino acid

<220>  
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<222> (131)..(131)  
<223> Xaa can be any naturally occurring amino acid

<220>  
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<222> (135)..(136)  
<223> Xaa can be any naturally occurring amino acid

<400> 184

Lys Gln Xaa Xaa Leu Phe Xaa Xaa Cys Cys Arg Ala Ile Ala Xaa Lys  
1 5 10 15

Tyr Pro Glu Ile Ile Tyr Glu Glu Val Ile Ile Asp Asn Cys Cys Met  
20 25 30

Thr Leu Val Lys Asn Pro Gly Thr Phe Asp Val Leu Val Met Pro Asn  
35 40 45

Leu Tyr Gly Asp Ile Ile Ser Asp Leu Cys Ala Gly Leu Ile Gly Gly  
50 55 60

Leu Gly Leu Thr Pro Ser Cys Asn Ile Gly Glu Gly Gly Ile Cys Leu  
65 70 75 80

Ala Glu Ala Val His Gly Ser Ala Pro Asp Ile Ser Gly Lys Asn Leu  
85 90 95

Ala Asn Pro Thr Ala Leu Met Leu Ser Ala Val Met Met Leu Arg His  
100 105 110

Leu Gln Xaa Asn Asp Gln Ala Xaa Arg Ile His Asn Ala Ile Leu Gln  
115 120 125

Thr Ile Xaa Glu Gly Lys Xaa Xaa Thr

<210> 185  
 <211> 652  
 <212> DNA  
 <213> *Lolium perenne*

<220>  
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 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (7)..(7)  
 <223> n is a, c, g, or t

<220>  
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 <222> (12)..(13)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (646)..(646)  
 <223> n is a, c, g, or t

<400> 185  
 gncaccncca gnnacaactc tggtacctca attgctactc cacacctcac tacttctacc 60  
 aatccactac acagcttcga gctaccccgcc ccccgcaatc caaactacct ctccctagca 120  
 aatctacaac atgaaggcag tcgtagctgg agccgccggt ggcattggac agccattgtc 180  
 cctcctcctt aagacctgcc cgctcgtcac tgagctcgcc ctatacgatg tcgtcaacgc 240  
 cgtcggtgtc gcgactgacc tctcccatc ctcctcgccc gcgaaagtaa ccggctacct 300  
 gccggcaaat gacggtatgc agcaggctct cactggcgcc gacatcggtg tcatccccgc 360  
 tggtattccc cgcaagcccc gcatgacccg tgacgacctc ttcaagatca acgcccgc 420  
 tgtccagggt ctcacgagg gtgtcgccaa gactgcccc aaggcatacg ttctcgatc 480  
 ctccaacccc gtcaactcga ctgtgcccac cgccgccgag gtgctgaaga aggccggtgt 540  
 cttcgacccc aagaagctct tcggtgtcac caccctcgat gtcgtccgcg ccgagacctt 600  
 cgttgccgag atcactggcg agaaggacct agcgaagttg aacatncccg ta 652

<210> 186  
 <211> 216  
 <212> PRT  
 <213> *Lolium perenne*

<220>  
 <221> misc\_feature  
 <222> (1)..(2)  
 <223> Xaa can be any naturally occurring amino acid

<220>  
 <221> misc\_feature  
 <222> (4)..(4)  
 <223> Xaa can be any naturally occurring amino acid

<220>  
 <221> misc\_feature  
 <222> (214)..(214)  
 <223> Xaa can be any naturally occurring amino acid

<400> 186

Xaa Xaa Pro Xaa Thr Thr Leu Val Pro Gln Leu Leu Leu His Thr Ser  
 1 5 10 15

Leu Leu Leu Pro Ile His Tyr Thr Ala Ser Ser Tyr Pro Ala Pro Ala  
 20 25 30

Ile Gln Thr Thr Ser Pro Gln Ile Tyr Asn Met Lys Ala Val Val Ala  
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Cys Pro Leu Val Thr Glu Leu Ala Leu Tyr Asp Val Val Asn Ala Val  
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Gly Val Ala Thr Asp Leu Ser His Ile Ser Ser Pro Ala Lys Val Thr  
 85 90 95

Gly Tyr Leu Pro Ala Asn Asp Gly Met Gln Gln Ala Leu Thr Gly Ala  
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Asp Ile Val Val Ile Pro Ala Gly Ile Pro Arg Lys Pro Gly Met Thr  
 115 120 125

Arg Asp Asp Leu Phe Lys Ile Asn Ala Gly Ile Val Gln Gly Leu Ile  
 130 135 140

Glu Gly Val Ala Lys His Cys Pro Lys Ala Tyr Val Leu Val Ile Ser  
 145 150 155 160

Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Leu Lys Lys  
 165 170 175

Ala Gly Val Phe Asp Pro Lys Lys Leu Phe Gly Val Thr Thr Leu Asp  
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 attccacctg ccagtgtggc ttgnttttgg tgcggccttc aagcatgtcc tgcaaaagga 660  
 cattcgtant cttcaaatcc ttcagcagat gtacaacgag tggccgttta gggttacat 720  
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Gly Glu Glu His Leu Cys Phe Arg Thr Leu Gln Arg Phe Thr Ala Ala  
 100 105 110

Thr Leu Glu His Gly Met His Pro Pro Ile Ser Pro Lys Pro Glu Trp  
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Ser Ile Val Phe Gln Glu Pro Arg Phe Val Glu Tyr Phe Arg Leu Ala  
 145 150 155 160

Thr Pro Glu Leu Glu Tyr Gly Arg Met Asn Ile Gly Ser Arg Pro Ser  
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Lys Arg Lys Pro Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile Pro Trp  
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Ile Phe Ala Trp Thr Gln Thr Arg Phe His Leu Pro Val Trp Leu Xaa  
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Phe Gly Ala Ala Phe Lys His Val Leu Gln Lys Asp Ile Arg Xaa Leu  
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 cagatcttga ancagctcca gcatctgttg cacgactatt ttcaatagac tggtagatga 240  
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 ccaagccaga atggcgtgct ataatggatg agatggctgt agtggcaaca aaagaatatc 660  
 gatcaattgt cttccaagaa ccacgttttg tcgaatactt ccgctcggca acacctgaga 720  
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Asp Val Leu Ala Val Glu Leu Leu Gln Arg Glu Cys His Ile Lys Lys  
35 40 45

Pro Leu Arg Val Val Pro Leu Phe Glu Lys Leu Ala Asp Leu Glu Xaa  
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50	55	60
Ala 65	Pro	Ala Ser Val Ala 70 Arg Leu Phe Ser Ile 75 Asp Trp Tyr Met Asn 80
Arg	Ile Asn Gly Lys 85 Gln Glu Val Met Ile 90 Gly Tyr Ser Asp Ser 95 Gly	
Lys	Asp Ala Gly 100 Arg Leu Ser Ala Ala 105 Trp Gln Met Tyr Lys 110 Ala Gln	
Glu	Asp Leu 115 Ile Lys Val Ala Lys 120 Gln Tyr Gly Val Lys 125 Leu Thr Met	
Phe 130	His Gly Arg Gly Gly Thr 135 Val Gly Arg Gly Gly 140 Gly Pro Ser His	
Leu 145	Ala Ile Leu Ser Gln 150 Pro Pro Asp Thr Ile 155 Gln Gly Ser Leu Arg 160	
Val	Thr Val Gln Gly 165 Glu Val Ile Glu His 170 Ser Phe Gly Glu Glu 175 His	
Leu	Cys Phe Arg 180 Thr Leu Gln Arg Phe 185 Thr Ala Ala Thr Leu 190 Glu His	
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Gln 225	Glu Pro Arg Phe Val 230 Glu Tyr Phe Arg Ser 235 Ala Thr Pro Glu Thr 240	
Glu	Tyr Gly Arg Met 245 Asn Ile Gly Ser Arg 250 Pro Ser Lys Arg Lys 255 Pro	
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Thr	Gln Thr 275 Arg Phe His Leu Pro 280 Val Trp Leu Gly Phe 285 Gly Ala Ala	
Phe	Lys 290 His Ile Met Gln Lys 295 Asp Ile Arg Asn Ile 300 His Thr Leu Lys	
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 Arg Glu Ser Tyr Ile Thr Thr Leu Asn Val Cys Gln Ala Xaa Thr Leu  
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 Lys Arg Ile Arg Asp Pro Ser Phe Glu Val Thr Pro Gln Gln Ala Pro  
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 Leu Ser Lys Glu Phe Ala Asp Glu Lys Glu Pro Ala Glu Leu Val Gln  
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 gttgcgtgag tcatacatca caacattgaa tgtttgccaa gcctacaccc tgaagcggat 240  
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gnacttgatc ttaatgncaa gggttgttga agcctgatct aaataaaata tggaacaatg	600
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ggtgacaccg cagcaggcac ctctgtcgaa ggagttcgct gatgagaagg agccagctga	180
gctggtgcaa ctgaaccgtg ggagcgagta cgccccaggc ctggaggaca ccctcatcct	240
taccatgaag ggtatttgct gtggaatgca aaacacaggc taggccagtt tgcctatttg	300
gaataactgt catcccgta gatgggcgtg aatatgtgtg ttccccaaat gctagtgaac	360
cctggaggca tttggccact tacatgcctt ttggttatgg atgnactttg atcttaatgt	420
caanggttgt tgaagcctga tctaaatnaa atatggaaca atgatattct ggttgtttct	480
ta	482

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gagggcataga atcgctccgt gcaattccat gcatctttgn ttggacacag acaaggnttn      180
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Gly Asn Thr Cys Thr Leu Asn Met Val Gly Met Asn Ile Gly Ser Arg  
 20 25 30

Pro Ser Lys Arg Lys Pro Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile  
 35 40 45

Pro Cys Ile Phe Xaa Trp Thr Gln Thr Arg Xaa Xaa Xaa Pro Val Xaa  
 50 55 60

Leu Xaa Phe Xaa Ser Thr Xaa Thr Pro  
 65 70

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 gaccagact accacgtcgc actgcggccc catctttcca aggaggttat ggacacaagc 180

aagccggctt ccgagcttgt gacgctgaac ccggccagcg agtacgcccc ggggctggag 240  
gacaccctca tcttgaccat gaagggcggt gctgccggtc tgcaaaacac cggttagggc 300  
caggagagat gcctgatcac catctttttg tatcttcatg atgatgcgat gtttttcttt 360  
agtcgtttgc ggtgggcctt atatctctcg gacgtagctg catctgtctc cctgctcagt 420  
gaggaataat ggcgtttcgc ccaagtatat tgataaataa agggaaccga tgtaatttc 480  
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Val Xaa Gly Xaa Lys Asp Leu Leu Glu Gly Asp Pro Tyr Leu Lys Gln  
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Arg Leu Arg Leu Arg Asp Ala Tyr Ile Thr Thr Met Asn Val Cys Gln  
20 25 30

Ala Tyr Thr Leu Lys Arg Ile Arg Asp Pro Asp Tyr His Val Ala Leu  
35 40 45

Arg Pro His Leu Ser Lys Glu Val Met Asp Thr Ser Lys Pro Ala Ser  
50 55 60

Glu Leu Val Thr Leu Asn Pro Ala Ser Glu Tyr Ala Pro Gly Leu Glu  
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Asp Thr Leu Ile Leu Thr Met Lys Gly Val Ala Ala Gly Leu Gln Asn  
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Thr Gly

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Page 189

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gcagatgaag tacatctgtc ctcaaaaaaa aaatctgcaa agcattacat agagttcttg	180
aagcaagttc ctccaaatga accttatcgt gtcatacttg gcgatgtcag ggataaactg	240
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gngtcaactt ttactaatgt tgaactgttt ctggaacctc ttgagctgtg ctacagatcc	360
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 Cys Ser Asp Glu Leu Arg Val Arg Ala Asp Glu Val His Leu Ser Ser  
 35 40 45  
 Lys Lys Lys Ser Ala Lys His Tyr Ile Glu Phe Trp Lys Gln Val Pro  
 50 55 60  
 Pro Asn Glu Pro Tyr Arg Val Ile Leu Gly Asp Val Arg Asp Lys Leu  
 65 70 75 80  
 Tyr Tyr Thr Arg Glu Arg Ser Arg His Ile Leu Thr Thr Gly Ile Ser  
 85 90 95  
 Asp Ile Pro Glu Xaa Ser Thr Phe Thr Asn Val Glu Leu Phe Leu Glu  
 100 105 110  
 Pro Leu Glu Leu Cys Tyr Arg Ser Leu Ser Xaa Cys Xaa Asp Lys Xaa  
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 Ile Ala Xaa Gly Ser Leu Leu Asp Phe Xaa Xaa Xaa Xaa Xaa Thr Leu  
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 Trp Ala Tyr Ser Xaa Glu  
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gcttcaggac gctgcagcgt ttcacagctg ctactcttga gcatgggatg cgtccaccca 180  
tttcacaaa gccagagtgg cgagctcttc ttgatgagat ggctgtggtt gcaactgagg 240  
aataccggtc aatcgtcttc caagaaccac gcttcgctga gtatttccgc cttgcaacac 300  
cagagacaga gtatggcagg atgaatatag gaagcaggcc atcaaagaga aaaccaagtg 360  
gtggcattga atcactccgt gcaattccat ggatcttcgc atggacgcag acacggttcc 420  
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gaaatttcca tatgctccag gagatgtaca acgagtggcc atttttcagg gtcacgatcg 540  
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Ser Phe Gly Glu Glu His Leu Cys Phe Arg Thr Leu Gln Arg Phe Thr  
35 40 45

Ala Ala Thr Leu Glu His Gly Met Arg Pro Pro Ile Ser Pro Lys Pro  
 50 55 60  
 Glu Trp Arg Ala Leu Leu Asp Glu Met Ala Val Val Ala Thr Glu Glu  
 65 70 75 80  
 Tyr Arg Ser Ile Val Phe Gln Glu Pro Arg Phe Val Glu Tyr Phe Arg  
 85 90 95  
 Leu Ala Thr Pro Glu Thr Glu Tyr Gly Arg Met Asn Ile Gly Ser Arg  
 100 105 110  
 Pro Ser Lys Arg Lys Pro Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile  
 115 120 125  
 Pro Trp Ile Phe Ala Trp Thr Gln Thr Arg Phe His Leu Pro Val Trp  
 130 135 140  
 Leu Gly Phe Gly Gly Ala Phe Lys His Ile Leu Lys Lys Asp Ile Arg  
 145 150 155 160  
 Asn Phe His Met Leu Gln Glu Met Tyr Asn Glu Trp Pro Phe Phe Arg  
 165 170 175  
 Val Thr Ile Asp Leu Val Glu Met Val Phe Ala Lys Gly Asn Pro Gly  
 180 185 190  
 Ile Ala Ala Leu Tyr Asp Arg Leu Leu Val Ser Glu Glu Leu Gln Pro  
 195 200 205  
 Leu Gly Asp Lys Leu Arg  
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cttgctccta tgattgctag gggagtgatg ctgggccctg accagcctgt gatcctccac 180  
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gctgcattcc ctcttcttaa aggagttggt gctacaactg atgtggttga ggcatgcact 300  
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cataacaggg cactaggtca aatttctgaa agactaaacg ttgaagtttc tgatgtgaaa 600  
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Pro Asp Gln Pro Val Ile Leu His Met Leu Asp Ile Pro Pro Ala Ala  
35 40 45

Glu Ser Leu Asn Gly Val Lys Met Glu Leu Val Asp Ala Ala Phe Pro  
50 55 60

Leu Leu Lys Gly Val Val Ala Thr Thr Asp Val Val Glu Ala Cys Thr  
65 70 75 80

Gly Val Asn Ile Ala Val Met Val Gly Gly Phe Pro Arg Lys Glu Gly  
85 90 95

Met Glu Arg Lys Asp Val Met Thr Lys Asn Val Ser Ile Tyr Lys Ser  
100 105 110

Gln Ala Ser Ala Leu Glu Lys His Ala Ala Ala Asn Cys Lys Val Leu  
115 120 125

Val Val Ala Asn Pro Ala Asn Thr Asn Ala Leu Ile Leu Lys Glu Tyr  
130 135 140

Ala Pro Ser Ile Pro Glu Lys Asn Ile Ser Ala Leu Thr Arg Leu Asp  
145 150 155 160

His Asn Arg Ala Leu Gly Gln Ile Ser Glu Arg Leu Asn Val Glu Val  
165 170 175

Ser Asp Val Lys Asn Val Ile Ile Trp Gly Lys Xaa Phe Ile Asn Ser  
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atgcttgaca ttncacctgg ag

202

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tcgtccctat gattgctagg ggagtgatgc tcggccctga ccagcctgtg atcctccaca 180  
tgcttgacat cccacctgca gccgaatcac tgaacggtgt aaaaatggag ttggtggatg 240  
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ctgctgcaaa ctgcaagggt cttgttggtg ccaaccagc aaacaccaat gcattgatct 480  
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gtccctatga ttgctagggg agtgatgctc ggccctgacc agcctgtgat cctccacatg    180
cttgacattc cacctgcagc cgaatcactc aacggtgtta aaatggagtt ggtggatgct    240
gcattccctc ttcttaaagg agttgttgct acaactgatg tggttgaggc atgcactggt    300
gtcaatattg ccgttatggt tgggtgggttc cctagaaaag aaggatgga gaggaaagat    360
gtgatgacaa aaaatgtctc tatttacaag tctcaggctt ctgcccttga aaaacatgct    420
gctgcaaact gcaaggttct tggtgttgcc aaccagcaa acaccaatgc attgatcttg    480
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<213> *Trifolium repens*

<400> 210

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gccaaagacc cagttcgtgt tcttgtcact ggtgctgcag gacaaattgg gtatgctctt    120
gtccctatga ttgctagggg agtgatgctc ggccctgacc agcctgtgat cctccacatg    180
cttgacattc cacctgcagc cgaatcactg aacggtgtta aaatggagtt ggtggatgct    240
gcattccctc ttcttaaagg agttgttgct acaactgatg tggttgaggc atgcactggt    300
gtcaatattg ccgttatggt tgggtgggttc cctagaaaag aaggatgga gaggaaagat    360
gtgatgacaa aaaatgtctc tatttacaag tctcaggctt ctgcccttga aaaacatgct    420
gctgcaaact gcaaggttct tggtgttgcc aaccagcaa acaccaatgc attgatcttg    480
aaggaatatg ctccatccat tcctgagaaa aacatttctg ctttgactag attggaccat    540
aacagggcac taggtcaaat ttctgaaaga ctaaa                               575
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<210> 211

<211> 606

<212> DNA

<213> *Trifolium repens*

<220>

<221> misc\_feature

<222> (7)..(7)

<223> n is a, c, g, or t

<400> 211

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caaagaccca gttcgtgttc ttgtcactgg tgctgcagga caacttgggt atgctcttgt	120
ccctatgatt gctaggggag tgatgctcgg ccctgaccag cctgtgatcc tccacatgct	180
tgacattcca cctgcagccg aatcactcaa cgggtgttaa atggagttgg tggatgctgc	240
attccctctt cttaaaggag ttgttgctac aactgatgtg gttgaggcat gcactggtgt	300
caatattgcc gttatggttg gtgggttccc tagaaaagaa ggtatggaga ggaaagatgt	360
gatgacaaaa aatgtctcta tttaacaagtc tcaggcttct gcccttgaaa aacatgctgc	420
tgcaaactgc aaggttcttg ttgttgccaa cccagcaaac accaatgcat tgatcttgaa	480
ggaatatgct ccatccattc ctgagaaaaa cttttctgct ttgactagat tggaccataa	540
cagggcacta ggtcaaattt ctgaaagact aaacgttgaa gtttctgatg tgaaaaatgt	600
tataat	606

<210> 212  
 <211> 344  
 <212> DNA  
 <213> *Trifolium repens*

<220>  
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 <223> n is a, c, g, or t

<220>  
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<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>  
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 <222> (317)..(317)  
 <223> n is a, c, g, or t

<220>  
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 <222> (321)..(321)  
 <223> n is a, c, g, or t

<220>  
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 <222> (327)..(327)  
 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <222> (333)..(333)  
 <223> n is a, c, g, or t

<220>  
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 <222> (335)..(335)  
 <223> n is a, c, g, or t

<220>  
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 <222> (343)..(343)  
 <223> n is a, c, g, or t

<400> 212  
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 aaagaccag ttcgtgttct tgtcactggt gctgcaggac aacttgggta tgctcttgct 120  
 cctatgattg ctaggggagt gatgctcggc cctgaccagc ctgtgatcct ccacatgctt 180  
 gacattccac ctgcagccga atcactcaac ggtgttaaaa tggagttggt ggatgctgca 240  
 ttccctcttc ttaaaggagt tgttgctaca actgatgtgg ttgaggcatg cactgggtgn 300  
 aatattgacg ntatggntgg ngggttncnt acnanacaac gtnt 344

<210> 213  
 <211> 558  
 <212> DNA  
 <213> Trifolium repens

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <222> (27)..(27)  
 <223> n is a, c, g, or t

<400> 213  
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 ttcgtgttct tgtcactggt gctgcaggac aaattgggta tgctcttgct cctatgattg 120

ctaggggagt gatgctcggc cctgaccagc ctgtgaccc	ccacatgctt gacattccac	180
ctgcagccga atcactcaac ggtgttaaaa tggagttggt	ggatgctgca ttccctcttc	240
ttaaaggagt tgttgctaca actgatgtgg ttgaggcatg	cactggtgtc aatattgccg	300
ttatggttgg tgggttcctt agaaaagaag gtatggagag	gaaagatgtg atgacaaaaa	360
atgtctctat ttacaagtct caggcttctg cccttgaaaa	acatgctgct gcaaactgca	420
aggttcttgt tgttgccaac ccagcaaaca ccaatgcatt	gatcttgaag gaatatgctc	480
catccattcc tgagaaaaac atttctgctt tgactagatt	ggaccataac agggcactag	540
gtcaaatttc tgaaagac		558

<210> 214  
 <211> 599  
 <212> DNA  
 <213> *Trifolium repens*

<220>  
 <221> misc\_feature  
 <222> (4)..(4)  
 <223> n is a, c, g, or t

<400> 214		
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ttcgtgttct tgtcctgggtg ctgcaggaca aattgggtat	gctcttgtcc ctatgattgc	120
taggggagtg atgctcggcc ctgaccagcc tgtgaccc	cacatgcttg acattccacc	180
tgcagccgaa tcaactcaacg gtgttaaaat ggagttgggtg	gatgctgcat tccctcttct	240
taaaggagtt gttgctacaa ctgatgtggt tgaggcatgc	actggtgtca atattgccgt	300
tatggttgggt gggttcccta gaaaagaagg tatggagagg	aaagatgtga tgacaaaaaa	360
tgtctctatt tacaagtctc aggccttctgc ccttgaaaaa	catgctgctg caaactgcaa	420
ggttcttgtt gttgccaacc cagcaaacac caatgcattg	atcttgaagg aatatgctcc	480
atccattcct gagaaaaaca tttctgcttt gactagattg	gaccataaca gggcactagg	540
tcaaatttct gaaagactaa acgttgaagt ttctgatgtg	aaaaatgtta taatctggg	599

<210> 215  
 <211> 577  
 <212> DNA  
 <213> *Trifolium repens*

<220>  
 <221> misc\_feature  
 <222> (24)..(24)  
 <223> n is a, c, g, or t

<400> 215		
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tggttcttgta ctggtgctgc aggacaactt gggatgctc ttgtccctat gattgctagg	120
ggagtgatgc tcggccctga ccagcctgtg atcctccaca tgcttgacat tccacctgca	180
gccgaatcac tcaacggtgt taaaatggag ttggtggatg ctgcattccc tcttcttaaa	240
ggagttgttg ctacaactga tgtggttgag gcatgcactg gtgtcaatat tgccgttatg	300
gttgggtgggt tccctagaaa agaaggtatg gagaggaaag atgtgatgac aaaaaatgtc	360
tctatttaca agtctcaggc ttctgccctt gaaaaacatg ctgctgcaaa ctgcaagggt	420
cttggtgttg ccaaccagc aaacaccaat gcattgatct tgaaggaata tgctccatcc	480
attcctgaga aaaacatttc tgctttgact agattggacc ataacagggc actagggtcaa	540
atttctgaaa gactaaacgt tgaagtttct gatgtgg	577

<210> 216  
 <211> 594  
 <212> DNA  
 <213> Trifolium repens

<220>  
 <221> misc\_feature  
 <222> (10)..(10)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (23)..(23)  
 <223> n is a, c, g, or t

<400> 216	
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tggttcttgtc actggtgctg caggacaaat tgggtatgct cttgtcccta tgattgctag	120
gggagtgatg ctcgccctg accagcctgt gatcctccac atgcttgaca ttccacctgc	180
agccgaatca ctcaacggtg ttaaaatgga gttggtggat gctgcattcc ctcttcttaa	240
aggagttggt gctacaactg atgtggttga ggcatgcact ggtgtcaata ttgccgttat	300
ggttgggtggg ttccctagaa aagaaggtat ggagaggaaa gatgtgatga caaaaaatgt	360
ctctatttac aagtctcagg cttctgccct tgaaaaacat gctgctgcaa actgcaagggt	420
tcttgttgtt gccaacccag caaacaccaa tgcattgatc ttgaaggaat atgctccatc	480
cattcctgag aaaaacattt ctgctttgac tagattggac cataacaggg cactagggtca	540
aatttctgaa agactaaacg ttgaagtttc tgatgtgaaa aatgttataa tctg	594

<210> 217  
 <211> 653  
 <212> DNA  
 <213> Trifolium repens

<220>  
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 <222> (319)..(319)  
 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <222> (628)..(628)  
 <223> n is a, c, g, or t

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<222> (635)..(635)
<223> n is a, c, g, or t

<400> 217
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gtgttcttgt cactggtgct gcaggacaaa ttgggtatgc tcttgtccct atgattgcta      120
ggggagtgat gctcggccct gaccagcctg tgatcctcca catgcttgac attccacctg      180
cagccgaatc actcaacggt gttaaaatgg agttggtgga tgctgcattc cctcttctta      240
aaggagttgt tgctacaact gatgtggttg aggcatgcac tgggtgtcaat attgccgtta      300
tggttggtgg gttccctana aaagaangta tggagaggaa agatgtgatg acaaaaatgt      360
ctctatttac aagtcttaag cttttgncct tgaaaaacat gctgctgcaa actgcaagggt      420
tcttgttggt gncaaccac caaacaccaa tgcattgatc ttgaaggaa atgctccatn      480
cattcctgan aaaaacattt ntgctttgac tagattggac cataacaggg cactaggggca      540
aatttntgaa anactaaacg ttgaagtttn tgatgtgaaa aatgttatat atggggggaaa      600
tnattcatca actcaatacc ctgntgtnaa ccacncaacc gttaaaatct cct              653

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<210> 218
<211> 1111
<212> DNA
<213> Trifolium repens

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<220>
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<222> (9)..(9)
<223> n is a, c, g, or t

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<220>
<221> misc_feature
<222> (14)..(15)
<223> n is a, c, g, or t

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<220>
<221> misc_feature
<222> (20)..(20)
<223> n is a, c, g, or t

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<220>
<221> misc_feature
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<220>
<221> misc_feature
<222> (66)..(66)

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<223> n is a, c, g, or t

<400> 218

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tcaaaaatgg ccaaagaccc agttcgtgtt ctcgtcactg gtgctgcagg gcaaattggt    180
tatgcacttg tccctatgat tgctagggga gtgatgcttg gtcctgatca acctgtgatc    240
cttcacatgc ttgatattcc tccagcagca gagtcattga atggagttaa gatggagtgt    300
gtcgatgctg catttccact tcttaaaggt gttgttgcta caactgatgt tggtgaagca    360
tgactggag tcaatattgc agtcatggtt ggtggattcc caagaaaaga aggtatggag    420
aggaaggatg tgatgtctaa gaacgtctct atttacaagt cccaggcttc tgcccttgaa    480
aagcatgctg ctgccaaactg caaggttttg gttgttgcta acccagcaaa caccaatgca    540
ttgatcttga aggaatttgc tccatctatt ccagagaaaa acatttcttg tttgactaga    600
cttgatcaca acagggcatt gggccaaatt tctgaaagat tgaatgttca agtttctgat    660
gtaaagaatg tcattatctg gggtaatcat tcatcaactc agtatcctga tgtcaaccat    720
gcaactgtta acacccccgc tggggagaag cctgtccgtg agcttgtttc tgatgacgcc    780
tggttgaatg gagaattcat atctaccgtt caacaacgtg gtgctgcaat tattaaggct    840
agaaagcttt caagcgcact atccgctgct agcgtgctt gcgaccacat tcgcgattgg    900
gttcttgga ctccccaggg caccttcgtt tcaatgggag tgtattctga tggttcttac    960
aacgtaccag ctggactcat ctattcattc cctgtcacca ctgctaattg ggaatggaaa   1020
attgttcaag gactttcaat tgacgagttc tcaaggaaga agttggactt gacagctgaa   1080
gagttatccg aggaaaagag tttggcatac t                                1111
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<210> 219

<211> 328

<212> PRT

<213> *Trifolium repens*

<400> 219

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Ile Gly Tyr Ala Leu Val Pro Met Ile Ala Arg Gly Val Met Leu Gly  
20 25 30

Pro Asp Gln Pro Val Ile Leu His Met Leu Asp Ile Pro Pro Ala Ala  
35 40 45

Glu Ser Leu Asn Gly Val Lys Met Glu Leu Val Asp Ala Ala Phe Pro  
50 55 60

Leu 65 Leu Lys Gly Val 70 Val Ala Thr Thr Asp 75 Val Val Glu Ala Cys Thr 80  
 Gly Val Asn Ile 85 Ala Val Met Val Gly 90 Gly Phe Pro Arg Lys Glu Gly 95  
 Met Glu Arg Lys 100 Asp Val Met Ser Lys 105 Asn Val Ser Ile Tyr Lys Ser 110  
 Gln Ala Ser 115 Ala Leu Glu Lys His 120 Ala Ala Ala Asn Cys Lys Val Leu 125  
 Val 130 Val Ala Asn Pro Ala Asn 135 Thr Asn Ala Leu Ile 140 Leu Lys Glu Phe  
 Ala 145 Pro Ser Ile Pro Glu 150 Lys Asn Ile Ser Cys 155 Leu Thr Arg Leu Asp 160  
 His Asn Arg Ala 165 Leu Gly Gln Ile Ser Glu 170 Arg Leu Asn Val Gln Val 175  
 Ser Asp Val Lys 180 Asn Val Ile Ile Trp Gly Asn His Ser Ser 190 Thr Gln  
 Tyr Pro Asp 195 Val Asn His Ala Thr 200 Val Asn Thr Pro Ala 205 Gly Glu Lys  
 Pro Val 210 Arg Glu Leu Val Ser 215 Asp Asp Ala Trp Leu Asn Gly Glu Phe 220  
 Ile 225 Ser Thr Val Gln Gln 230 Arg Gly Ala Ala Ile 235 Ile Lys Ala Arg Lys 240  
 Leu Ser Ser Ala 245 Leu Ser Ala Ala Ser Ala 250 Ala Cys Asp His Ile Arg 255  
 Asp Trp Val 260 Leu Gly Thr Pro Gln Gly 265 Thr Phe Val Ser Met Gly Val 270  
 Tyr Ser Asp 275 Gly Ser Tyr Asn Val 280 Pro Ala Gly Leu Ile 285 Tyr Ser Phe  
 Pro Val 290 Thr Thr Ala Asn Gly 295 Glu Trp Lys Ile Val 300 Gln Gly Leu Ser  
 Ile 305 Asp Glu Phe Ser Arg 310 Lys Lys Leu Asp Leu 315 Thr Ala Glu Glu Leu 320

Ser Glu Glu Lys Ser Leu Ala Tyr  
325

<210> 220  
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<212> DNA  
<213> Trifolium repens

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<220>  
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<222> (14)..(15)  
<223> n is a, c, g, or t

<220>  
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>  
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>  
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<222> (317)..(317)  
<223> n is a, c, g, or t

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gttcttcctc tcttaatctt ccctgtttga ttccttcag ttcttcaaaa atggccaaag 120  
accagttcg tgttctcgtc actggtgctg cagggcaaat tggttatgca cttgtcccta 180  
tgattgctag gggagtgatg cttggtcctg atcaacctgt gatcctacac atgcttgata 240

ttccacccgc agcagagtca ttgaatggag ttaagatgga gatggncgat gctgnattnn	300
cacttggttaa aggngangct gct	323

<210> 221  
 <211> 350  
 <212> DNA  
 <213> Trifolium repens

<220>  
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 <222> (6)..(6)  
 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<220>  
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<220>  
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<220>  
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 <222> (314)..(314)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (320)..(320)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (336)..(336)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (341)..(341)  
 <223> n is a, c, g, or t

<220>  
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 <222> (344)..(346)  
 <223> n is a, c, g, or t

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ccagttcgtg ttctcgtcac tgggtctgca gggcaaattg gttatgcact tgtccctatg	180

attgctaggg gagtgatgct tggctctgat caacctgtga tcctacacat gcttgatatt	240
ccacccgcag cagagtcatt gaatggagtt aagatggagt tggtcgatgc tgcatttcca	300
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<210> 222  
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 <212> DNA  
 <213> *Trifolium repens*

<220>  
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 <223> n is a, c, g, or t

<220>  
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<220>  
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 <223> n is a, c, g, or t

<400> 222	
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tgttctcgtc actggtgctg caggccaaat tggttatgca cttgtcccta tgattgctag	180
gggagtgatg cttggtcctg atcaacctgt gatccttcac atgcttgata tccctccagc	240
agcagagtca ttgaatggag ttaaaatgga gttggtggat gctgcatttc cacttcttaa	300
aggtgttggt gctacaactg atgttggtga agcatgcact ggagtcaata ttgcagtcac	360
ggttggtgga ttcccaagaa aagaagggtat ggagaggaag gatgtgatga ctaagaatgt	420
ctctatttac aagtcccagg cttctgccct tgaaaagcat gctgctgcca actgcaaggt	480
tttggttatt gctaaccag caaataccaa tgcattgatc ttgaaggagt ttgctccatc	540
tattccagag aaaaacattt cagctttgac tagacttgat cacia	585

<210> 223  
 <211> 593  
 <212> DNA  
 <213> *Trifolium repens*

<220>  
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 <223> n is a, c, g, or t

<220>  
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<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (28)..(29)

<223> n is a, c, g, or t

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<221> misc\_feature

<222> (36)..(36)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (44)..(44)

<223> n is a, c, g, or t

<400> 223

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taatcttcgc ggttcgattc cttccgtttc ttcagcaatg gccaaagacc cagttcgtgt 120

cctcgttact ggtgctgcag gccaaattgg ttatgcactt gtccctatga ttgctagggg 180

agtgatgctt ggtcctgatc aacctgtgat cttcacatg cttgatatcc ctccagcagc 240

agagtcattg aatggagtta aaatggagtt ggtggatgct gcatttccac ttcttaaagg 300

cgttgttgct acaactgatg ttgttgaagc atgcactgga gtcaatattg cagtcatggt 360

tggtggattc ccaagaaaag aaggtatgga gaggaaggat gtgatgacta agaatgtctc 420

tatttacaag tcccaggctt ctgcccttga aaagcatgct gctgccaaact gcaagggttt 480

ggttattgct aaccagcaa ataccaatgc attgatcttg aaggagtttg ctccatctat 540

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<213> Trifolium repens

<220>

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 ttaatcttcc ctgtttgatt ccttccgttc ttcaaaaatg gccaaagacc cagttcgtgt 120  
 tctcgtcact ggtgctgcag ggcaaattgg ttatgcactt gtccttatga ttgctagggg 180  
 agtgatgctt ggtcctgatc aacctgtgat ccttcacatg cttgatattc ctccagcagc 240  
 agagtcattg aatggagtta agatggagtt ggtc gatgct gcatttccac ttcttaaagg 300  
 tggttggtgct acaactgatg ttgttgaggc atgcactgga gtcaatattg cagtcattgg 360  
 tggttggtgct ccaagaaaag aaggtatgga gaggaaggat gtgatgtcta agaacgtctc 420  
 tatttacaag tcccaggctt ctgcccttga aaagcatgct gctgccaaact gcaaggnttt 480  
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actggtgctg caggccaaat tggttatgca cttgtcccta tgattgctag gggagtgatg 180  
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ttgaatggag ttaaaatgga gttggtggat gctgcatttc cacttcttaa aggcgttggt 300  
gctacaactg atgttggtga agcatgcact ggagtcaata ttgcagtcac ggttggtgga 360  
ttccaagaa aagaaggtat ggagaggaag gatgtgatga ctaagaatgt ctctatttac 420  
aagtcccagg cttctgcctt tgaaaagcat gctgctgcc actgcaagg tttggttatt 480  
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tactggtgct gcaggccaaa ttggttatgc acttgtcctt atgattgcta ggggagtgat	180
gcttggtcct gatcaacctg tgatccttca catgcttgat atccctccag cagcagagtc	240
attgaatgga gttaaaatgg agttggcgga tgctgcattt ccacttctta aaggcgttgt	300
tgctacaact gatgttggtg aagcatgcac tggagtcaat attgcagtca tggttggtgg	360
attcccaaga aaagaaggta tggagaggaa ggatgtgatg actaagaatg tctctattta	420
caagtcccag gcttcagccc ttgaaaagca tgctgctgcc aactgcaagg ttttggttat	480
tgctaacca gcaataacca atgcattgat cttgaaggag tttgctccat ctattccaga	540
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<210> 227

<211> 597

<212> DNA

<213> *Trifolium repens*

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ttgaatggag ttaaaatgga gttggtggat gctgcatttc cacttcttaa aggcgttggt	300
gctacaactg atgttggtga agcatgcact ggagtcaata ttgcagtcac ggttggtgga	360

ttcccaagaa aagaaggtat ggagaggaag gatgtgatga ctaagaatgt ctctatttac	420
aagtcccagg cttctgccct tgaaaagcat gctgctgcca actgcaaggt tttgggttatt	480
gctaaccag caaataccaa tgcattgatc ttgaaggagt ttgctccatc tattccagag	540
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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ggccaaattg gttatgcact tgtccctatg attgctaggg gagtgatgct tggtcctgat 180

caacctgtga tccttgacat gcttgatatt gctgcagnag nagagtnatt gaatggagct 240

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<210> 229

<211> 567

<212> DNA

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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gctgcngggc aaattgggta tgcacttgtc cctatgattg ctaggggagt gatgcttggg	180
cctgatcaac ctgtgatcct acacatgctt gatattccac ccgcagcaga gtcattgaat	240
ggagttaaga tggagttggg cgatgctgca tttccacttc ttaaagggtg tgttgctaca	300
actgatgttg ttgaggcatg cactggagtc aatatcgag tcattggttg tggattccca	360
agaaaagaag gtatgganag gaaggatgtt atgtctaaga acgtctctat ttacaagtcc	420
caagcttctg cccttgaaaa gcatgctgct gccaaactgca aggttttggt tgttgctaac	480
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<210> 230  
 <211> 569  
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gtgctgcagg gcaaattggg tatgcacttg tccctatgat tgctagggga gtgatgcttg	180
gtcctgatca acctgtgatc cttcacatgc ttgatattcc tccagcagca gagtcattga	240
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caactgatgt tgttgaggca tgcactggag tcaatattgc agtcattggt ggtggattcc	360
caagaaaaga aggtatggag aggaaggatg tgatgtctaa gaacgtctct atttacaagt	420
cccaggcttc tgcccttgaa aagcatgctg ctgccaaactg caaggttttg gttgttgcta	480
accagcaac accaatgcat tgatcttgaa ggaatttgct ccatctattc cagagaaaaa	540
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 ggtgctgcag ggcaaattgg ttatgcactt gtccctatga ttgctagggg agtgatgctt 180  
 ggtcctgatc aacctgtgat cctacacatg cttgatattc caccgcgagc agagtcattg 240  
 aatggagtta agatggagtt ggtcgaatgt gcattttccac ttcttaaagg tgttggttgc 300  
 acaactgatg ttgttgaggc atgcactgga gtcaatatcg cagtcattgg ttggtggattc 360  
 ccaagaaaag aaggtatgga gaggaaggat gttatgtcta agaacgtctc tatttacaag 420  
 tcccaagctt ctgcccttga aaagcatgct gctgccaaact gcaagggtttt ggttggttgc 480  
 aaccagcaa acaccaatgc attgatcttg aaggaatttg ctccatctat tccagagaaa 540  
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<210> 232  
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 <213> Trifolium repens

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gcaggccaaa ttggttatgc acttgctcct atgattgcta ggggagtgat gcttggctcct 180  
gatcaacctg tgatccttca catgcttgat atccctccag cagcagagtc attgaatgga 240  
gttaaaatgg agttggtgga tgctgcattt ccacttctta aaggcgttgt tgctacaact 300  
gatgttggtg aagcatgcac tggagtcaat attgcagtca tggttggtgg attccaaga 360  
aaagaaggta tggagaggaa ggatgtgatg actaagaatg tctctattta caagtcccag 420  
gcttctgccc ttgaaaagca tgctgctgcc aactgcaagg ttttggttat tgctaaccga 480  
gcaaatacca atgcattgat cttgaaggag tttgctccat ctattccaga gaaaaacatt 540  
tcagctttga ctagacttga tcacaacagg gcattgggcc aaatt 585

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cttctatttc ttcaaaaatg gccaaanacc cagttcgtgt tctcgtcact ggtgctgcag	120
gccaaattgg ttatgcactt gtccctatga ttgctagggg agtgatgctt ggtcctgatc	180
aacctgtgat ccttcacatg cttgatattc ctccagcagc agagtcattg aatggagtta	240
aaatggagtt ggtggatgct gcatttccac ttcttaaagg tgttggtgct acaactgatg	300
ttgttgaagc atgcactgga gtcaatattg cagtcatggt tgggtggattc ccaagaaaag	360
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 <212> DNA  
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tgctgcaggg caaattgggt atgcacttgt ccctatgatt gctaggggag tgatgcttgg	180
tcctgatcaa cctgtgatcc tacacatgct tgatattcca cccgcagcag agtcattgaa	240
tggagtttaag atggagttgg tcgatgctgc atttccactt cttaaagggtg ttgttgctac	300
aactgatgtt gttgagggcat gcaactggagt caatatcgca gtcattggtg gtggattccc	360
aagaaaagaa ggtatggaga ggaaggatgt tatgtctaag aacgtctcta ttacaagtc	420
ccaagcttct gcccttgaaa agcatgctgc tgccaactgc aagggttttg ttgttgctaa	480
cccagcaaac accaatgcat tgatcttgaa ggaatttgct ccatctattc cagagaaaaa	540
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 <223> n is a, c, g, or t

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 agaaaagaag gtatggagag gaaggatggt atgtctaaga acgtctctat ttacaagtcc 420  
 caagcttctg cccttgaaaa gcatgctgct gccaaactgca aggttttggt tggttgctaac 480  
 ccagcaaaca ccaatgcatt gatcttgaag gaatttgctc catctattcc agagaaaaac 540  
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<223> n is a, c, g, or t

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<222> (532)..(532)

<223> n is a, c, g, or t

<220>

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<222> (545)..(545)

<223> n is a, c, g, or t

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gattccttct atttcttcaa aaatggccaa agaccagatt cgtgttctcg tcactggtgc 120

tgcaggccaa attggttatg cacttgctcc tatgattgct aggggagtga tgcttggtcc 180

tgatcaacct gtgatccttc acatgcttga tttcctcca gcagcagagt cattgaatgg 240

agttaaaatg gagttggtgg atgctgcatt tccacttctt aaagggtgttg ttgctacaac 300

tgatgttggt gaagcatgca ctggagtcaa tattgcagtc atggttggtg gattcccaag 360

aaaagaaggt atggagagga aggatgtgat gactaagaat gtctctatatt acaagtccca 420

ggcttctgcc cttgaaaagc atgctgctgc caactgcaag gntttgggta ttgctaaccc 480

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<223> n is a, c, g, or t

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<400> 237
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attccttccg ttcttcaaaa atggccaaag acccagttcg tgttctcgtc actggtgctg      120
cagggcaa at tggttatgca cttgtcccta tgattgctag gggagtgatg cttggtcctg      180
atcaacctgt gatccttcac atgcttgata ttcctccagc agcagagtca ttgaatggag      240
ttaagatgga gttggtcgat gctgcatttc cacttcttaa aggtgttggt gctacaactg      300
atgttggtga ggcattgcact ggagtcaata ttgcagtcac ggttggtgga ttcccaagaa      360
aagaaggatg ggagaggaag gatgtgatgt ctaagaacgt ctctatttac aagtcccagg      420
cttctgccct tgaagagcat gctgctgcca actgcaagggt tttggttggt gctaaccag      480
caacaccaat gcattgatct tgaaggaatt tgctccatct attccagaga aaaacatttc      540
ttgtttgact agacttgatc acaacagggc attgggcca aattctgaaa g                591

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<210> 238
<211> 571
<212> DNA
<213> Trifolium repens

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<220>
<221> misc_feature
<222> (4)..(4)
<223> n is a, c, g, or t

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<220>
<221> misc_feature
<222> (16)..(17)
<223> n is a, c, g, or t

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<400> 238
gtancctcac tctctnnaac aaaaactggt cttccctctt aatcttcctt gttcgattcc      60
ttctatttct tcaaaaatgg ccaaagaccc agttcggtgt ctcgtcactg gtgctgcagg      120
ccaaattggt tatgcacttg tccctatgat tgctagggga gtgatgcttg gtcctgatca      180
acctgtgatc cttcacatgc ttgatattcc tccagcagca gagtcattga atggagttaa      240
aatggagttg gtggatgctg catttccact tcttaaagggt gttgttgcta caactgatgt      300
tgttgaagca tgcactggag tcaatattgc agtcatgggt ggtggattcc caagaaaaga      360
aggtatggag aggaaggatg tgatgactaa gaatgtctct atttacaagt cccaggcttc      420
tgcccttgaa aagcatgctg ctgccaaact caagggtttg gttattgcta acccagcaaa      480
taccaatgca ttgatcttga aggagtttgc tccatctatt ccagagaaaa acatttcagc      540
tttgactaga cttgatcaca acagggcatt g                571

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<210> 239
<211> 433
<212> DNA

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<213> Trifolium repens

<220>  
<221> misc\_feature  
<222> (9)..(9)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (28)..(28)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (358)..(358)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (386)..(386)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (402)..(402)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (404)..(406)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (409)..(409)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (413)..(413)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (416)..(416)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (430)..(430)  
<223> n is a, c, g, or t

<400> 239  
gcattctctna aacaaaaact gttcttcnct cttaatcttc cctgttcgat tccttctatt 60  
tcttcaaaaa tggccaaaga ccagttcgt gttctcgtca ctggtgctgc aggccaaatt 120  
ggttatgcac ttgtccctat gattgctagg ggagtgatgc ttggtcctga tcaacctgtg 180  
atccttcaca tgcttgatat tcctccagca gcagagtcatt tgaatggagt taaaatggag 240  
ttggtggatg ctgcatttcc acttcttaaa ggtgttggtg ctacaactga tgttgttgaa 300

gcatgcactg gagtcaatat tgcagtcacg gttggtggat tcccaagaaa agaaggtntg 360  
gagaggaagg atgtgatgac taagantgtc tctatttaca anannnagnc ttntgncctt 420  
gaaaaagatn ctg 433

<210> 240  
<211> 585  
<212> DNA  
<213> *Trifolium repens*

<220>  
<221> misc\_feature  
<222> (10)..(10)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (35)..(35)  
<223> n is a, c, g, or t

<400> 240  
tcaccctctn aacaaaaact gttcttcttc ccttnatctt ccctgtttga ttccttccgt 60  
tcttcaaaaa tggccaaaga ccaggttcgt gttctcgta ctggtgctgc agggcaaatt 120  
ggttatgcac ttgtccctat gattgctagg ggagtgatgc ttggtcctga tcaacctgtg 180  
atccttcaca tgcttgatat tcctccagca gcagagtcac tgaatggagt taagatggag 240  
ttggtcgatg ctgcatttcc acttcttaaa ggtgttggtg ctacaactga tgttggtgag 300  
gcatgcactg gagtcaatat tgcagtcacg gttggtggat tcccaagaaa agaaggtatg 360  
gagaggaagg atgtgatgac taagaacgac tctatttaca agtcccaggc ttctgccctt 420  
gaaaagcatg ctgctgccaa ctgcaagggt ttggttggtg ctaaccagc aaacaccaat 480  
gcattgatct tgaaggaatt tgctccatct attccagaga aaaacatttc ttgtttgact 540  
agacttgatc acaacagggc attggggcaa atttctgaaa gattg 585

<210> 241  
<211> 610  
<212> DNA  
<213> *Trifolium repens*

<220>  
<221> misc\_feature  
<222> (6)..(6)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (30)..(30)  
<223> n is a, c, g, or t

<400> 241  
tctctnaaca aaaactgttc ttccctcttn atcttccctg ttcgattcct tctatttctt 60

caaaaatggc caaagaccca gttcgtgttc tcgtcactgg tgctgcaggc caaattgggt	120
atgcacttgt ccctatgatt gctaggggag tgatgcttgg tcctgatcaa cctgtgatcc	180
ttcacatgct tgatattcct ccagcagcag agtcattgaa tggagttaaa atggagttgg	240
tggatgctgc atttccactt cttaaagggtg ttgttgctac aactgatgtt gttgaagcat	300
gcactggagt caatattgca gtcattggtg gtggattccc aagaaaagaa ggtatggaga	360
ggaaggatgt gatgactaag aatgtctcta ttacaagtc ccaggcttct gcccttgaaa	420
agcatgctgc tgccaactgc aagggttttg ttattgctaa ccagcaaat accaatgcat	480
tgatcttgaa ggagtttgct ccatctattc cagagaaaaa catttcagct ttgactagac	540
ttgatcaca cagggcattg ggccaaattt ctgaaagatt gaatattcaa gtttctgatg	600
taaagaatgt	610

<210> 242  
 <211> 568  
 <212> DNA  
 <213> Trifolium repens

<220>  
 <221> misc\_feature  
 <222> (23)..(23)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (53)..(53)  
 <223> n is a, c, g, or t

<400> 242	
caaaaactgc tcttcctctc ttnatcttcc ctgttcgatt ccttcccttc ttnaaaatgg	60
ccaaagaccc agttcgtgtt ctcgtcactg gtgctgcagg gcaaattggg tatgcacttg	120
tccctatgat tgctagggga gtgatgcttg gtcctgatca acctgtgatc ctacacatgc	180
ttgatattcc acccgagca gagtcattga atggagttaa gatggagttg gtcgatgctg	240
catttccact tcttaaagggt gttgttgcta caactgatgt tgttgaggca tgactggag	300
tcaatatcgc agtcattggt ggtggattcc caagaaaaga aggtatggag aggaaggatg	360
ttatgtctaa gaacgtctct atttacaagt cccaagcttc tgcccttgaa aagcatgctg	420
ctgccaactg caagggtttg gttgttgcta acccagcaaa caccaatgca ttgatcttga	480
aggaatttgc tccatctatt ccagagaaaa acatttcttg tttgactaga cttgatcaca	540
acagggcatt gggccaaatt tctgaaag	568

<210> 243  
 <211> 558  
 <212> DNA  
 <213> Trifolium repens

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<220>
<221> misc_feature
<222> (21)..(21)
<223> n is a, c, g, or t

<400> 243
aaaactgttc ttcctctctt natcttccct gttcgattcc ttcccttctt caaaaatggc      60
caaagacca gttcgtgttc tcgtcactgg tgctgcaggg caaattgggt atgcacttgt      120
ccctatgatt gctaggggag tgatgcttgg tcctgatcaa cctgtgatcc tacacatgct      180
tgatattcca cccgcagcag agtcattgaa tggagttaag atggagttag tcgatgctgc      240
atttccactt cttaaagggt ttgttgctac aactgatgtt gttgaggcat gcactggagt      300
caatatcgca gtcattggtt gtggattccc aagaaaagaa ggtatggaga ggaaggatgt      360
tatgtctaag aacgtctcta ttacaagtc ccaagcttct gcccttgaaa agcatgctgc      420
tgccaactgc aagggttttg ttgttgctaa ccagcaaac accaatgcat tgatcttgaa      480
ggaatttgct ccattctatt cagagaaaaa catttcttgt ttgactagac ttgatcacia      540
cagggcattg ggccaaat                                     558

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<210> 244
<211> 752
<212> DNA
<213> Trifolium repens

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<220>
<221> misc_feature
<222> (2)..(3)
<223> n is a, c, g, or t

<400> 244
gnnttcttcc tctcttcaac ttccctgttt gattccttcc agttcttcaa aaatggccaa      60
agaccaggtt cgtgttctcg tcaactggtgc tgcagggcaa attggttatg cacttgtccc      120
tatgattgct aggggagtgat tgcttggtcc tgatcaacct gtgaccttc acatgcttga      180
tattcctaca gcagcagagt cattgaatgg agttaagatg gagttggtcg atgctgcatt      240
tccacttctt aaagggtgtt ttgctacaac tgatgttggt gaggcattgca ctggagtcaa      300
tattgcagtc atggttggtg gattcccaag aaaagaagggt atggagagga aggatgtgat      360
gtctaagaac gtctctatatt acaagtccca ggcttctgcc cttgaaaagc atgctgctgc      420
caactgcaag gttttggttg ttgctaacc agcaaacacc aatgcattga tcttgaagga      480
atttgctcca tctattccag agaaaaacat ttcttggttg actagacctg atcacaacag      540
ggcattgggc caaatttctg aaagattgaa tgttcaagtt tctgatgtaa agaattgcat      600
tatctggggg aatcattcat caactcagta tcctgatgtc aaccatgcaa ctgttaacac      660
ccccgctggg gagaagcctg tccgtgagct tgtttctgat gacgcctggt tgaatggaga      720

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attcatatct accgttcaac aacgtggtgc tg

752

<210> 245  
<211> 583  
<212> DNA  
<213> Trifolium repens

<220>  
<221> misc\_feature  
<222> (17)..(17)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (46)..(46)  
<223> n is a, c, g, or t

<400> 245  
ggttcttccc tcttatnctt ccctgttcga ttccttctat ttcttnaaaa tggccaaaga 60  
cccagttcgt gttctcgtca ctggtgctgc aggccaaatt gggtatacac ttgtccctat 120  
gattgctagg ggagtgatgc ttggtcctga tcaacctgtg atccttcaca tgcttgatat 180  
tcctccagca gcagagtcac tgaatggagt taaaatggag ttggtggatg ctgcatttcc 240  
acttcttaaa ggtgttggtg ctacaactga tgttggtgaa gcatgcactg gagtcaatat 300  
tgcagtcacg gttggtggat tcccaagaaa agaaggatg gagaggaagg atgtgatgac 360  
taagaatgtc tctatttaca agtcccaggc ttctgccctt gaaaagcatg ctgctgccaa 420  
ctgcaagggt ttggttattg ctaaccagc aaataccaat gcattgatct tgaaggagtt 480  
tgctccatct attccagaga aaaacatttc agctttgact agacttgatc acaacagggc 540  
attgggcaa atttctgaaa gattgaatat tcaagtttct gat 583

<210> 246  
<211> 573  
<212> DNA  
<213> Trifolium repens

<220>  
<221> misc\_feature  
<222> (11)..(11)  
<223> n is a, c, g, or t

<400> 246  
ttcctctctt natcttcctt gtttgattcc ttccgttctt caaaatggcc aagaccaggt 60  
tcgtgttctc gtcactggtg ctgcagggca aattgggtat gcacttgctc ctatgattgc 120  
taggggagtg atgcttggtc ctgatcaacc tgtgatcctt cacatgcttg atattcttcc 180  
agcagcagag tcattgaatg gagttaagat ggagttggtc gatgctgcat ttccacttct 240  
taaagggtgtt gttgctacaa ctgatgttgt tgaggcatgc actggagtca atattgcagt 300  
catggttggt ggattcccaa gaaaagaagg tatggagagg aaggatgtga tgtctaagaa 360

cgtctctatt tacaagtccc aggcttctgc ccttgaaaag catgctgctg ccaactgcaa	420
ggttttgggtt gttgctaacc cagcaaacac caatgcattg atcttgaagg aatttgctcc	480
atctattcca gagaaaaaca tttcttggtt gactagactt gatcacaaca gggcattggg	540
ccaaatttct gaaagattga atgttcaagt ttc	573

<210> 247  
 <211> 562  
 <212> DNA  
 <213> Trifolium repens

<220>  
 <221> misc\_feature  
 <222> (24)..(24)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (38)..(38)  
 <223> n is a, c, g, or t

<400> 247	
ggggagtgat gcttggctct gatnacctgt gacccctnca tgcttgatat ccctccagca	60
gcagagtcac tgaatggagt taaaatggag ttggtggatg ctgcatttcc acttcttaaa	120
ggcattggtt ctacaactga tgttggtgaa gcatgcaactg gagtcaatat tgcagtcagt	180
gttggtggat tccaagaaa agaaggatg gagaggaagg atgtgatgac taagaatgtc	240
tctatttaca agtcccaggc ttctgccctt gaaaagcaag ctgctgcaa ctgcaagggt	300
ttggttattg ctaaccagc aaataccaat gcattgatct tgaaggagtt tgctccatct	360
attccagaga aaaacatttc agctttgact agacttgatc acaacagggc attgggcaa	420
atttctgaaa gattgaatat tcaagtttct gatgtaaaga atgtcattat ctggggtaat	480
cattcatcaa ctgagtatcc tgatgtcaac catgcaactg ttaacacccc cgccggggag	540
aagcctgtcc gtgaacttgt tt	562

<210> 248  
 <211> 515  
 <212> DNA  
 <213> Trifolium repens

<220>  
 <221> misc\_feature  
 <222> (1)..(1)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (9)..(9)  
 <223> n is a, c, g, or t



<220>  
 <221> misc\_feature  
 <222> (11)..(11)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (17)..(17)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (22)..(22)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (367)..(367)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (427)..(427)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (482)..(482)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (488)..(489)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (500)..(500)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (510)..(510)  
 <223> n is a, c, g, or t

<400> 248  
 ntattcctnc ngcagcngag tnttgaatgg agtaagatgg agttgggtcga tgctgcattt 60  
 ccacttctta aaggtgttgt tgctacaact gatgttgttg aggcattgcac tggagtcaat 120  
 attgcagtca tggttggtgg attcccaaga aaagaaggta tggagaggaa ggatgtgatg 180  
 tctaagaacg tctctattta caagtcccag gcttctgccc ttgaaaagca tgctgctgcc 240  
 aactgcaagg ttttggttgt tgctaacca gcaaacacca atgcattgat cttgaaggaa 300  
 tttgctccat ctattccaga gaaaaacatt tcttgtttga ctagacttga tcacaacagg 360  
 gcattgngcc aaatttctga aagattgaat gtccaagttt ctgatgtaaa gaatgtcatt 420  
 atctggnnga atcattcatc aactcagcat cctgatgtca accatgcaac tgттаacacc 480  
 cncgctgnng agaagcctgn ccgtgagctn gtttc 515

<210> 249  
 <211> 598  
 <212> DNA  
 <213> *Trifolium repens*

<220>  
 <221> misc\_feature  
 <222> (20)..(20)  
 <223> n is a, c, g, or t

<400> 249  
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 cttcttaaag gtgttggtgc tacaactgat gttgttgagg catgcactgg agtcaatatt 120  
 gcagtcattg ttggtggatt cccaagaaaa gaaggatagg agaggaagga tgtgatgtct 180  
 aagaacgtct ctatttataa gtcccaggct tctgcccttg aaaagcatgc tgctgccaac 240  
 tgcaagggtt ttggttggtgc taaccagca aacaccaatg cattgatctt gaaggaattt 300  
 gctccatcta ttccagagaa aaacatttct tgtttgacta gacttgatca caacagggca 360  
 ttgggcaaaa tttctgaaag attgaatgtc caagtttctg atgtaaagaa tgtcattatc 420  
 tggggtaatc attcatcaac tcagtatcct gatgtcaacc atgcaactgt taacaccccc 480  
 gctggggaga agcctgtccg tgagcttggt tctgatgacg cctgggttgaa tggagaattc 540  
 atatctaccg ttcaacaacg tgggtgctgca attattaagg ctagaaagct ttcaagtg 598

<210> 250  
 <211> 603  
 <212> DNA  
 <213> *Trifolium repens*

<400> 250  
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 tgaaaagcat gctgctgcca actgcaaggt tttggttggt gctaaccag caaacaccaa 120  
 tgcattgatc ttgaaggaat ttgctccatc tattccagag aaaaacattt cttgtttgac 180  
 tagacttgat cacaacaggg cattgggcca aatttctgaa agattgaatg ttcaagtttc 240  
 tgatgtaaag aatgtcatta tctggggtaa tcattcatca actcagtatc ctgatgtcaa 300  
 ccatgcaact gttaacaccc ccgctgggga gaagcctgtc cgtgagcttg tttctgatga 360  
 cgcctgggtg aatggagaat tcatatctac cgttcaacaa cgtgggtgctg caattattaa 420  
 ggctagaaag ctttcaagcg cactatccgc tgctagcgtc gcttgcgacc acattcgca 480  
 ttgggttctt ggaactcccc agggcacctt cgtttcaatg ggagtgtatt ctgatggttc 540  
 ttacaacgta ccagctggac tcatctattc attccctgtc accactgcta atggggaatg 600  
 gaa 603

<210> 251

<211> 695  
 <212> DNA  
 <213> Trifolium repens

<220>  
 <221> misc\_feature  
 <222> (1)..(6)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (8)..(8)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (10)..(10)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (12)..(13)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (25)..(25)  
 <223> n is a, c, g, or t

<400> 251  
 nnnnnngnan gnngtgatgt ctaanaacgt ctctatttac aagtcccagg cttctgccct 60  
 tgaaaagcat gctgctgcca actgcaagggt tttggttggt gctaaccag caaacaccaa 120  
 tgcattgatc ttgaaggaat ttgctccatc tattccagag aaaaacattt cttgtttgac 180  
 tagacttgat cacaacaggg cattgggcca aatttctgaa agattgaatg ttcaagtttc 240  
 tgatgtaaag aatgtcatta tctggggtaa tcattcatca actcagtatc ctgatgtcaa 300  
 ccatgcaact gttaacaccc ccgctgggga gaagcctgtc cgtgagcttg tttctgatga 360  
 cgcctggttg aatggagaat tcatatctac cgttcaacaa cgtggtgctg caattattaa 420  
 ggctagaaaag ctttcaagcg cactatccgc tgctagcgtc gcttgcgacc acattcgcg 480  
 ttgggttctt ggaactcccc agggcacctt cgtttcaatg ggagtgtatt ctgatggttc 540  
 ttacaacgta ccagctggac tcatctattc attccctgtc accactgcta atggggaatg 600  
 gaaaattgtt caaggacttt caattgacga gttctcaagg aagaagttgg acttgacagc 660  
 tgaagagtta tccgaggaaa agagtttggc atact 695

<210> 252  
 <211> 1408  
 <212> DNA  
 <213> Trifolium repens

<220>  
 <221> misc\_feature

<222> (5)..(5)  
 <223> n is a, c, g, or t  
  
 <220>  
 <221> misc\_feature  
 <222> (46)..(46)  
 <223> n is a, c, g, or t  
  
 <220>  
 <221> misc\_feature  
 <222> (767)..(767)  
 <223> n is a, c, g, or t  
  
 <220>  
 <221> misc\_feature  
 <222> (812)..(812)  
 <223> n is a, c, g, or t  
  
 <220>  
 <221> misc\_feature  
 <222> (821)..(821)  
 <223> n is a, c, g, or t  
  
 <220>  
 <221> misc\_feature  
 <222> (823)..(823)  
 <223> n is a, c, g, or t  
  
 <220>  
 <221> misc\_feature  
 <222> (851)..(851)  
 <223> n is a, c, g, or t  
  
 <220>  
 <221> misc\_feature  
 <222> (922)..(922)  
 <223> n is a, c, g, or t  
  
 <220>  
 <221> misc\_feature  
 <222> (933)..(933)  
 <223> n is a, c, g, or t  
  
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 ccgtcgatgc tcagatccgt ccaatcagcc gtctcccgcg cctcttctca cctaaccgcg 180  
 cgtggctatg ctaccgaacc agttccagaa cgcaagggtg ccattctcgg cgctgccggc 240  
 gggatcggcc agcctctctc tcttctcatg aagctcaacc ctctcgtttc aaccctatct 300  
 ctttatgata ttgctggaac ccctggtgtc gccgctgatg tcagccacat caactccaga 360  
 tctgaggtaa ctgggtatgc aggtgaagaa gagcttgga aagctttgga gggtgctgat 420  
 gttgttataa ttcttctgtg tgtgcccaga aagcctggaa tgactcgtga tgatcttttc 480  
 aatattaacg ctggcattgt caagtcactt gccactgcta tttctaagta ctgcccccat 540  
 gcccttggtt acatgataag caaccctgtg aactccaccg ttccatttgc tgcagagggt 600  
 ttcaagaagg cagggacata tgacgagaag agattgtttg gggttacaac ctttgatgta 660  
 gtcagggcaa aaactttcta tgccgggaaa gctaaagtgc cagttgccga ggtcaatgta 720  
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 caagccaatc tgggtgatga tacccttaag gntttaacgg nanggacaca agatggagga 840  
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 ggagccatat ttgctgatgc tngcctcaaa ggnctgaatg gagttccaga tgttattgag 960  
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<400> 253

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Arg Lys Val Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu  
 35 40 45

Ser Leu Leu Met Lys Leu Asn Pro Leu Val Ser Thr Leu Ser Leu Tyr  
 50 55 60

Asp Ile Ala Gly Thr Pro Gly Val Ala Ala Asp Val Ser His Ile Asn  
 65 70 75 80

Ser Arg Ser Glu Val Thr Gly Tyr Ala Gly Glu Glu Glu Leu Gly Lys  
 85 90 95

Ala Leu Glu Gly Ala Asp Val Val Ile Ile Pro Ala Gly Val Pro Arg  
 100 105 110

Lys Pro Gly Met Thr Arg Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile  
 115 120 125

Val Lys Ser Leu Ala Thr Ala Ile Ser Lys Tyr Cys Pro His Ala Leu  
 130 135 140

Val Asn Met Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala  
 145 150 155 160  
 Glu Val Phe Lys Lys Ala Gly Thr Tyr Asp Glu Lys Arg Leu Phe Gly  
 165 170 175  
 Val Thr Thr Leu Asp Val Val Arg Ala Lys Thr Phe Tyr Ala Gly Lys  
 180 185 190  
 Ala Lys Val Pro Val Ala Glu Val Asn Val Pro Val Ile Gly Gly His  
 195 200 205  
 Ala Gly Val Thr Ile Leu Pro Leu Phe Xaa Gln Ala Thr Pro Gln Ala  
 210 215 220  
 Asn Leu Gly Asp Asp Thr Leu Lys Xaa Leu Thr Xaa Xaa Thr Gln Asp  
 225 230 235 240  
 Gly Gly Thr Glu Val Xaa Thr Ala Lys Ala Gly Lys Gly Ser Ala Thr  
 245 250 255  
 Leu Ser Met Ala Tyr Ala Gly Ala Ile Phe Ala Asp Ala Xaa Leu Lys  
 260 265 270  
 Xaa Leu Asn Gly Val Pro Asp Val Ile Glu Cys Ser Tyr Val Gln Ser  
 275 280 285  
 Asn Ile Ile Ser Asp Leu Pro Phe Phe Ala Ser Lys Val Arg Ile Gly  
 290 295 300  
 Lys Asn Gly Val Glu Glu Ile Leu Gly Leu Gly Ser Leu Thr Asp Phe  
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 cgatgctcag atccgtccaa tcagccgtat cccgcgcctc ctctcaccta acccgccgtg 180  
 gctatgctac cgaaccagtt ccagaacgca aggtggccat tctcggtgct gccggcggga 240  
 tcggacagcc tctctctctt ctcatgaagc tcaaccctct cgtttcaacc ctatctcttt 300  
 atgatattgc tggaaccctt ggtgtcgccg ctgatgtcag ccacatcaac tccagatctg 360  
 aggtaactgg gtatgcaggt gaagaagagc ttggaaaagc tttggagggt gctgatgttg 420  
 ttataattcc tgctggtgtg cccagaaagc ctggaatgac tcgtgatgat cttttcaata 480  
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 tgctcagatc cgtccaatca gccgtatccc gcgcctcctc tcacctaacc cgccgtggct 180  
 atgctaccga accagttcca gaacgcaagg tggccattct cgggtgctgcc ggcgggatcg 240  
 gacagcctct ctctcttctc atgaagctca accctctcgt ttcaacccta tctctttatg 300  
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 taactgggta tgcaggtgaa gaagagcttg gaaaagcttt ggagggtgct gatgttggtta 420  
 taattcctgc tggtgtgccc agaaagcctg gaatgactcg tgatgatctt ttcaatatta 480  
 acgctggcat tgtcaagtca cttgccactg ctattttctaa gtactgcccc catgcccttg 540



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caatcagccg tctcccgcg ctcttctcac ctaaccgccc gtggctatgc taccgaacca	180
gttccagaac gcaaggtggc cattctcggc gctgccggcg ggatcggcca gcctctctct	240
cttctcatga agctcaaccc tctcgtttca accctatctc tttatgatat tgctggaacc	300
cctggtgtcg ccgctgatgt cagccacatc aactccagat ctgaggtaac tgggtatgca	360
ggtgaagaag agcttggaag agctttggag ggtgctgatg ttgttataat tcctgccggt	420
gtgcccagaa agcctggaat gactcgtgat gatcttttta atattaatgc tggcattgtc	480
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 ccgcgctcc tctcacctaa cccgccgtgg ctatgctacc gaaccagttc cagaacgcaa 180  
 ggtggccatt ctcggtgctg ccggcgggat cggacagcct ctctctcttc tcatgaagct 240  
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 tggaaaagct ttggaggggtg ctgatgttgt tataattcct gctggtgtgc ccagaaagcc 420  
 tggaatgact cgtgatgatc ttttcaatat taacgctggc attgtcaagt cacttgccac 480  
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 caccgttccc attgctgcag agg 563

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 cgcctcttct cacctaacct gccgtggcta tgctaccgaa ccagttccag aacgcaaggt 180  
 ggccattctc ggcgctgccg gcgggatcgg ccagcctctc tctcttctca tgaagctcaa 240  
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tgtcagccac atcaactcca gatctgaggt aactgggtat gcaggtgaag aagagcttgg	360
aaaagctttg gaggggtgctg atgttggttat aattcctgcc ggtgtgcca gaaagcctgg	420
aatgactcgt gatgatcttt tcaatattaa cgctggcatt gtcaagtcac ttgccactgc	480
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cgttcccatt gctgcagagg ttttcaagaa ggcagggaca tat	583

<210> 259  
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 <212> DNA  
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gccattctcg gcgctgccgg cgggatcggc cagcctctct ctcttctcat gaagctcaac	240
cctctcgttt caaccctatc tctttatgat attgctggaa cccctggtgt cgccgctgat	300
gtcagccaca tcaactccag atctgaggta actgggtatg caggtgaaga agagcttgga	360
aaagctttgg aggggtgctga tgttggtata attcctgccg gtgtgcccag aaagcctgga	420
atgactcgtg atgatctttt caatattaac gctggcattg tcaagtcact tgccactgct	480
atttctaagt actgccccca tgcccttggt aacatgataa gcaaccctgt gaactccacc	540
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cgcgccctctt ctcacctaac ccgccgtggc tatgtaccg aaccagttcc agaacgcaag    180
gtggccattc tcggcgctgc cggcgggacg ggccagcctc tctctcttct catgaagctc    240
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gatgtcagcc acatcaactc cagatctgag gtaactgggt atgcagggtga agaagagctt    360
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gctatttcta agtactgccc ccatgccctt gttaacatga taagcaaccc tgtgaactcc    540
accgttccca ttgctgcaga ggttttcaag aaggcagggg catatgacga gaagagattg    600
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gttcagattg ccgaggtcaa tgtacctgtt tttggaggcc atgcaggagt tactattntt    720
ccattatttt ntaaggaaca cctnaagcca atntggntga tgaaaccctt naggntttta    780
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<223> n is a, c, g, or t

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gcgcctcctc tcacctaacc cgccgtggct atgctaccga accagttcca gaacgcaggg    180
tggccattct cgggtgctgt ggcgggatcg gacagcctct ctctcttctc atgaagctca    240
accctctcgt ttcaacccta tctctttatg atattgctgg aacccttggg gtcgccgctg    300
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atgtcagcca catcaactcc agatctgagg taactgggta tgcaggtgaa gaagagcttg	360
gaaaagcttt ggagggtgct gatgttggtta taattcctgc tgggtgtgccc agaaagcctg	420
gaatgactcg tgatgatctt ttcaatatta acgctggcat tgtcaagtca cttgccactg	480
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gcctcttctc acctaaccgc ccgtggctat gctaccgaac cagttccaga acgcaagggtg	180
gccattctcg gcgctgccgg cgggatcggc cagcctctct ctcttctcat gaagctcaac	240
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gtcagccaca tcaactccag atctgaggta actgggtatg caggtgaaga agagcttgga	360
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gttcccattg ctgcagaggt tttcaagaag gcagggacat atgacgagaa gagattgttt	600
gggggttaca cccttgatgt agtcagggcg aaaactttct atgccgggaa agctaaagtt	660
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<400> 263  
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 caacggagag aattatgagg cgcgcgatgt tcagatccgt ccaatcagcc gtctcccgcg 120  
 cctcttctca cctaaccgc cgtggctatg ctaccgaacc agttccagaa cgcaaggngg 180  
 ccattctcgg cgctgccggc gggatcggcc agcctctctc tcttctcatg aagctcaacc 240



ctctcgtttc aaccctatct ctttatgata ttgctggaac ccctggtgtc gccgctgatg	300
tcagccacat caactccaga tctgaggtaa ctgggtatgc aggtgaagaa gagcttggaa	360
aagctttgga ggggtgctgat gttgttataa ttcctgccgg tgtgcccaaga aagcctggaa	420
tgactcgtga tgatcttttc aatattaacg ctggcattgt caagtcactt gccactggta	480
tttctaagta ctgcccccat gcccttggtta acatgataag caaccctgtg aactccaccg	540
ttcccatgtc tgnagagggt ttcaagaagg cngggacata tgacnagaan aaattgtttg	600
gggttcaacc cttgatgtag tcagggggaa aacttttttt gccgggaaag ctaaagtcc	660
agttgccng ggnaatgnnc ctgttnttg aggcctgcng agtntctatn tccctttttt	720
ttttaggcan ncctnancca nttnngngat naaaccttaa gggtttacgg gnnggcnaaa	780
aanggggaac aaaanttna c	801

<210> 264  
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gtccaatcag ccgtctcccg cgcctcttct cacctaacc gccgtggcta tgctaccgaa	120
ccagttccag aacgcaaggt ggccattctc ggcgtgccg gcgggatcgg ccagcctctc	180
tctcttctca tgaagctcaa ccctctcgtt tcaaccctat ctctttatga tattgctgga	240
acccctgggtg tcgccgctga tgtcagccac atcaactcca gatctgaggt aactgggtat	300
gcaggtgaag aagagcttgg aaaagctttg gaggggtgctg atgttggttat aattcctgcc	360
gggtgtgcca gaaagcctgg aatgactcgt gatgatcttt tcaatattaa cgctggcatt	420
gtcaagtcac ttgccactgc tttttctaag tactgcccc atgcccttgt taacatgata	480
agcaaccctg tgaactccac cgttccatt gctgcagagg ttttcaagaa ggcagggaca	540
tatgacgaga agagattggt tggggttaca acccttg	577

<210> 265  
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gttcagaac gcaaggtggc cattctcggc gctgctggcg ggatcggcca gcctctctct      180
cttctcatga agctcaatcc tctcgtttca accctatctc tttatgatat tgctggaacc      240
cctggtgtcg ccgctgatgt cagccacatc aactccagat ctgaggtaac tgggtatgca      300
ggggaagaag agcttggaag agctttggag ggtgctgatg ttgttataat tcctgctggt      360
gtgcccagaa agcctggaat gactcgtgat gatcttttca atattaacgc tggcattgtc      420
aagtcacttg ccactgctat ttctaagtac tgcccccatg cccttggtta catgataagc      480
aaccctgtga actccaccgt tcccattgct gcagagggtt tcaagaaggc agggacatat      540
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<210> 266
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<212> DNA
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<223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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 ccagttccag aacgcaaggn ggccattctc ggtgctgccg gcgggatcgg acagcctctc 180  
 tctcttctca tgaagctcaa ccctctcggt tcaaccctat ctctttatga tattgctgga 240  
 acccctgggtg tcgccgctga tgtcagccac atcaactcca gatctgaggt aactgggtat 300  
 gcaggtgaaag aagagcttgg aaaagctttg gaggggtgctg atgttggttat aattcctgct 360  
 ggtgtgcccc gaaagcctgg aatgactcgt gatgatcttt tcaatattaa cgctggcatt 420  
 gtcaagtcac ttgccactgc tatttctaag tactgcccc atgcccttgt taacatgata 480  
 agcaaccctg tgaactccac cgttccatt gctgcanagg ttttcaagaa ggcagggaca 540  
 tatgacnaga agagattggt tgggggttaca acccttgatg tagncagggc aaaaactttt 600  
 tatgctggga aagctaaagt tccagttgcc gaggncaatg gacctgttat aggaggccat 660  
 gcaggagtta ctattctncc attattttnt naggcaacac ctnaagccaa tntgggtgan 720  
 gatnccctta aggntttaac ggnanggacc caananggag gaacanaant tnngaccccc 780  
 anggtggaag ggttntnnac ttnnaatgg n 811

<210> 267  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 cccagaaagc ctggaatgac tcgtgatgat cttttcaata ttaacgctgg cattgtcaag 180  
 tcacttgcca ctgctatttc taagtactgc ccccatgccc ttgttaacat gataagcaac 240  
 cctgtgaact ccaccgttcc cattgctgca gaggttttca agaaggcagg gacatatgac 300  
 gagaagagat tgtttgggggt tacaaccctt gatgtagtca gggcaaaaac tttctatgct 360  
 gggaaagcta aagtccagc tgccgaggct aatgtacctg ttataggagg ccatgcagga 420  
 gttactattc tcccattatt ttctcaggca acacctcaag ccaatctgga tgatgatacc 480  
 attaaggctc taacggcaag gacacaagat ggaggaacag aagttgtgac cgccaaggct 540  
 ggaaaggggt ctgcaacttt gtcaatggct tatgctggag ccatatttgc tgatgcttgc 600

ctcaaaggtc tgaatggagt tccagatgtt attgagtgct catatgtgca atccaatatc	660
atctctgacc ttnccttctt tgcttccaag gtgaggattg ggaanaatgg tgtgggaana	720
at	722

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gaaaagcttt ggaggggtgct gatgttggtta taattcctgc tgggtgtgccc agaaagcctg	120
gaatgactcg tgatgatctt ttcaatatta acgctggcat tgtcaagtca cttgccactg	180
ctattttctaa gtactgcccc catgcccttg ttaacatgat aagcaaccct gtgaactcca	240
ccgttcccat tgctgcagag gttttcaaga aggcagggac atatgacgag aagagattgt	300
ttgggggttac aacccttgat gtagtcaggg caaaaacttt ctatgctggg aaagctaaag	360
ttccagttgc cgagggtcaat gtacctgtta taggaggcca tgcaggagtt actattctcc	420
cattattttc tcaggcaaca cctcaagcca atctggatga tgataccatt aaggctctaa	480
cggcaaggac acaagatgga ggaacagaag ttgtgaccgc caaggctgga aagggttctg	540
caactttgtc aatggct	557

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<222> (39)..(39)

<223> n is a, c, g, or t

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<222> (77)..(77)

<223> n is a, c, g, or t

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<222> (104)..(106)

<223> n is a, c, g, or t

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caatccaata tcattctntga ccttcctttc tttgcttcca aggnnnggat tgggaagaat 120

ggtgtggaag agattctg 138

<210> 270

<211> 465

<212> DNA

<213> Trifolium repens

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<222> (4)..(4)

<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<222> (447)..(447)

<223> n is a, c, g, or t

<220>

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<222> (450)..(450)

<223> n is a, c, g, or t

<220>

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<223> n is a, c, g, or t

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tttgcttcca ggtgaggatt gggaagaatg gtgtggaaga aattctgggc ttaggttctc 120

tcacagattt cgagcaacaa ggccttgaaa acctcaaggc tgaactcaaa tcattctattg 180

aaaaggggaat caaatTTGCC tcccagtaat cgaacatgtc atacattact ggattttttcc 240

atttagaacc agatcaaatt ttgcaaattc agaacaattg tttgtaatgt tgccggtagg 300

tataccccta gatttaataa gtaaattctgc gagagcagtt tattgctgca gggactgaaa 360

ttaaaaccag ttttaggttg gcctttccat tcgtaatggc ccttcattgt tgcattgnttt 420

catataatgc aattgaaggg tgntggncan cgatacacan ccccc 465

<210> 271

<211> 598

<212> DNA

<213> *Trifolium repens*

<220>

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<222> (17)..(17)



<223> n is a, c, g, or t

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cccattacca ttcatcccca gaggtcgaga tggcagcatc agcagcagct acttttacta 120  
ttggaactgc ccaaacaggg aggccacttc ctcaatcaaa cccttttggt ttgaaagtca 180  
attcccaggt taattttaag acctttctctg gtctcaaggc catgtcatct ctaagatgcg 240  
agtctgaatc atctttcttt ggcaacgaaa ctagtgctgc tctgcgtgca acttttgcac 300  
ccaaagctca aaaggaaaac caaaacatca accgcaattt gcacccctcag gcacccctaca 360  
aagtggcggg tcttggtgct gcaggaggaa ttggtcagcc actggcactt ctcattaaga 420  
tgtcgccttt ggtttccgac ctgcatcttt atgatatcgc gaatgttaag ggagttgctg 480  
ctgatatcag tcattgcaac actccttcaa aggttttgga tttcacaggt gcttctgagt 540  
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<210> 272  
<211> 169  
<212> PRT  
<213> Trifolium repens

<400> 272

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Gly Arg Pro Leu Pro Gln Ser Asn Pro Phe Gly Leu Lys Val Asn Ser  
20 25 30

Gln Val Asn Phe Lys Thr Phe Ser Gly Leu Lys Ala Met Ser Ser Leu  
35 40 45

Arg Cys Glu Ser Glu Ser Ser Phe Phe Gly Asn Glu Thr Ser Ala Ala  
50 55 60

Leu Arg Ala Thr Phe Ala Pro Lys Ala Gln Lys Glu Asn Gln Asn Ile  
65 70 75 80

Asn Arg Asn Leu His Pro Gln Ala Ser Tyr Lys Val Ala Val Leu Gly  
85 90 95

Ala Ala Gly Gly Ile Gly Gln Pro Leu Ala Leu Leu Ile Lys Met Ser  
100 105 110

Pro Leu Val Ser Asp Leu His Leu Tyr Asp Ile Ala Asn Val Lys Gly  
115 120 125

Val Ala Ala Asp Ile Ser His Cys Asn Thr Pro Ser Lys Val Leu Asp  
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135

140

Phe Thr Gly Ala Ser Glu Leu Ala Asn Cys Leu Lys Gly Val Asp Val  
 145 150 155 160

Val Val Ile Pro Ala Gly Val Pro Arg  
 165

<210> 273  
 <211> 554  
 <212> DNA  
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<220>  
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 <222> (44)..(44)  
 <223> n is a, c, g, or t

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 ttggaactgc ccaaacaggg aggccacttc ctcaatcaaa cccttttggt ttgaaagtca 180  
 attcccaggt taattttaag accttctctg gtctcaaggc catgtcatct ctaagatgcg 240  
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 ccaaagctca aaaggaaaac caaaacatca accgcaattt gcacccctcag gcacccctaca 360  
 aagtggcggg tcttggtgct gcaggaggaa ttggtcagcc actggcactt ctcattaaga 420  
 tgtcgccttt ggtttccgac ctgcatcttt atgatatcgc gaatgttaag ggagttgctg 480  
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 tggcaaattg tttg 554

<210> 274  
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 <213> Trifolium repens

<220>  
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 <222> (15)..(16)  
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cattaccatt cattcccaga ggtcgagatg gcagcatcag cagcagctac ttttactatt      120
ggaactgccc aaacagggag gccacttcct caatcaaacc cttttggttt gaaagtcaat      180
tcccagggtta attttaagac cttctctggt ctcaaggcca tgtcatctct aagatgctgag      240
tctgaatcat ctttctttgg caacgaaact agtgctgctc tgcgtgcaac ttttgcaccc      300
aaagctcaaa aggaaaacca aaacatcaac cgcaatttgc atcctcaggc atcctacaaa      360
gtggcggttc ttggtgctgc aggaggaatt ggtcagccac tggcacttct cattaagatg      420
tcgcctttgg tttccgacct gcattcttat gatatcgca atgttaaggg agttgctgct      480
gatatcagtc attgcaacac tccttcaaag gttttggatt tcacagggtgc ttctgagttg      540
gcaaattgtt tgaaagggtg ggatgtagtt gttatacctg ctggtgttcc cag              593

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<210> 275
<211> 590
<212> DNA
<213> Trifolium repens

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<223> n is a, c, g, or t

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gccc aaacag ggaggtcact tcctcaatca aacccttttg gtttgaaagt caattcccag      180
gttaatttta agaccttctc tgggtctcaag gccatgtcgt ctctaagatg cgagtctgaa      240
tcattcttct ttggcaacga aacttgctgct gctctgcgtg caacttttgc acccaaagct      300
caaaaggaaa accgaaacat caaccgcaat ttgcagcctc aggcattccta caaagtggcg      360
gttctcggtg ctgcaggagg aattggtcag ccacttgcac ttctcattaa gatgtcgctt      420
ttggtttccg acctgcatct ttatgacatt gcgaatgtta agggagttgc tgctgatatc      480
agccattgca acactccttc aaaggttttg gatttcacag gtgcttctga gctagcaaatt      540
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<210> 276
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<212> DNA
<213> Trifolium repens

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<223> n is a, c, g, or t

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<400> 276  
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attgcaagaa tctctgctca tcttcaacct ccaaatttcc aggaaggagg tgatgttgca 180  
attagcaaag ctaactgcag agcaaaaggt ggggcgccgg gattcaaagt agcaatcttg 240  
ggggctgctg gtggaattgg tcaatccctt tctttgctgt tgaagatcaa tccattggtt 300

tcagttcttc atctttatga tgttgtcaac actcctggtg tcactgctga tgtagtcac	360
attgacaccg gtgctgtggt tcgtggcctt ctagggcagg cacaacttga gaatgcactt	420
acaggcatgg acttggtcgt tatacctgct ggtgtgccga ggaaacctgg aatgacaagg	480
gatgacttat ttaagataaa tgctggaatt gtgaggactc ttagcgaagg aattgccaag	540
agctgtccta atgcaattgt caacttgatt agcaatccag tgaattccac tgtgccaatt	600
gctgctgagg ttttcaagaa agccggtaca tatgatccaa agcgactttt aggggttaca	660
accctcgatg ttgtgagggc aaataccttt gtggcagaag tacttggtgt tgatccaaga	720
gaggttgatg ttccagtggg aggagggcac gcaggagtca caatattacc tcttttgtca	780
cagggttaagc ctcccagtag cttcaccgca gaagaaaccg aatacctgac aaancgcatt	840
caaaaanggcg gaacacaagt tgttgaggca aaggctgggg ctggttcggc aacactantn	900
atggcctatg cagctgccaa gtttgctaac gcatgcctcc gtggcttgaa aggagaagcc	960
gggatagtgg agtgtgcttt tgttgattct caggttacgg aacttccttt ctttgcagcc	1020
aaggttcgtc ttggtcgcgg tggagcagaa gagatatac aacttggtcc ccttaatgag	1080
tatgagagga ttggattaga aaaagcgaag aaagagttag caggaagcat ccagaagga	1140
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 <223> Xaa can be any naturally occurring amino acid

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 <223> Xaa can be any naturally occurring amino acid

<400> 277

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Ala	His	Leu	Gln	Pro	Pro	Asn	Phe	Gln	Glu	Gly	Gly	Asp	Val	Ala	Ile
			20					25					30		

Ser Lys Ala Asn Cys Arg Ala Lys Gly Gly Ala Pro Gly Phe Lys Val  
 35 40 45  
 Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Ser Leu Ser Leu Leu  
 50 55 60  
 Leu Lys Ile Asn Pro Leu Val Ser Val Leu His Leu Tyr Asp Val Val  
 65 70 75 80  
 Asn Thr Pro Gly Val Thr Ala Asp Val Ser His Ile Asp Thr Gly Ala  
 85 90 95  
 Val Val Arg Gly Phe Leu Gly Gln Ala Gln Leu Glu Asn Ala Leu Thr  
 100 105 110  
 Gly Met Asp Leu Val Val Ile Pro Ala Gly Val Pro Arg Lys Pro Gly  
 115 120 125  
 Met Thr Arg Asp Asp Leu Phe Lys Ile Asn Ala Gly Ile Val Arg Thr  
 130 135 140  
 Leu Ser Glu Gly Ile Ala Lys Ser Cys Pro Asn Ala Ile Val Asn Leu  
 145 150 155 160  
 Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Phe  
 165 170 175  
 Lys Lys Ala Gly Thr Tyr Asp Pro Lys Arg Leu Leu Gly Val Thr Thr  
 180 185 190  
 Leu Asp Val Val Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly Val  
 195 200 205  
 Asp Pro Arg Glu Val Asp Val Pro Val Val Gly Gly His Ala Gly Val  
 210 215 220  
 Thr Ile Leu Pro Leu Leu Ser Gln Val Lys Pro Pro Ser Ser Phe Thr  
 225 230 235 240  
 Ala Glu Glu Thr Glu Tyr Leu Thr Xaa Arg Ile Gln Xaa Gly Gly Thr  
 245 250 255  
 Gln Val Val Glu Ala Lys Ala Gly Ala Gly Ser Ala Thr Leu Met Ala  
 260 265 270  
 Tyr Ala Ala Ala Lys Phe Ala Asn Ala Cys Leu Arg Gly Leu Lys Gly  
 275 280 285

Glu Ala Gly Ile Val Glu Cys Ala Phe Val Asp Ser Gln Val Thr Glu  
290 295 300

Leu Pro Phe Phe Ala Ala Lys Val Arg Leu Gly Arg Gly Gly Ala Glu  
305 310 315 320

Glu Ile Tyr Gln Leu Gly Pro Leu Asn Glu Tyr Glu Arg Ile Gly Leu  
325 330 335

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340 345 350

Phe Ile Lys Lys Lys Xaa Arg  
355

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>  
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<222> (670)..(670)  
<223> n is a, c, g, or t

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ttgcaagaat ctctgctcat cttcagcctc caaatttcca ggaaggaggt gatgttgcaa	180
ttagcaaagc taactgcaga gcaaaaggtg gggcgccggg attcaaagta gcaatcttgg	240
gggctgctgg tggaattggt caatcccttt ctttgctggt gaagatcaat ccattggttt	300
cagttcttca tctttatgat gttgtcaaca ctcctggtgt cactgctgat gttagtcaca	360
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cagggcatgga cttggtcgtt atacctgctg gtgtgccgag gaaacctgga atgacaaggg	480
atgacttatt taagataaat gctggaattg tgaggactct tagcgaagga attgccaaga	540
gctgtcctaa tgcaattgtc aacttgatta gcaatccagt gaattccact gtgccaattg	600
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gcaattagca aagctaactg cagagcaaaa ggtggggcgc cgggattcaa agtagcaatc	180
ttgggggctg ctggtggaat tgggtcaatcc ctttctttgc tgttgaagat caatccattg	240
gtttcagttc ttcattctta tgatgttgtc aacactcctg gtgtcactgc tgatgttagt	300
cacattgaca ccggtgctgt ggttcgtggc tttctagggc aggcacaact tgagaatgca	360
cttacaggca tggacttggt cgttatacct gctggtgtgc cgaggaaacc tggaatgaca	420
agggatgact tatttaagat aaatgctgga attgtgagga ctcttagcga aggaattgcc	480
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attgctgctg aggttttcaa gaaagccggt acat	574

<210> 280  
 <211> 543  
 <212> DNA  
 <213> Trifolium repens

<400> 280	
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gcaattagca aagctaactg cagagcgaag ggtggggcgc cgggattcaa agtagcaatc	180
ttgggggctg ctggtggaat tggatcaatcc ctttctttgc tgttgaagat caatccattg	240
gtttcagttc ttcattctta tgatgttgc aacactcctg gtgtcactgc tgatgttagt	300
cacattgata ccggtgctgt ggttcgtggc tttctagggc aggcacaact tgagaatgca	360
cttacaggca tggacttggc cgttatacct gctggtgtgc cgaggaaacc tggaatgaca	420
agggatgact tatttaagat aaatgctgga attgtgagga ctctttctga aggaattgtc	480
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att	543

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 <211> 593  
 <212> DNA  
 <213> *Trifolium repens*

<220>  
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ctcatcttcg cctccaaatt tccaggaagg aagtgatgtc gcaattagca aagctaactg	120
cagagcaaaa ggtggggcgc cgggattcaa agtagcaatc ttgggggctg ctggtggaat	180
tggatcaatcc ctttctttgc tgttgaagat caatccattg gtttcggttc ttcattctta	240
tgatgttgc aacactcctg gtgtcactgc tgatgttagt cacattgaca ccggtgctgt	300
ggttcgtggc tttctagggc aggcacaact tgagaatgca cttacaggca tggacttggc	360
cgttatacct gctggtgtgc cgaggaaacc tggaatgaca agggatgact tatttaagat	420
aaatgctgga attgtgagga ctctttctga aggaattgtc aagagctgtc ctaatgcaat	480
tgtcaacttg attagcaatc cagtgaattc cactgtgcc attgctgctg aggtcttcaa	540
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 caaaaggtgg ggcgccggga ttcaaagtag caatcttggg ggctgctggt ggaattggtc 180  
 aatccctttc tttgctgttg aagatcaatc cattggtttc ggttcttcat ctttatgatg 240  
 ttgtcaacac tcctggtgtc actgctgatg ttagtcacat tgacaccggt gctgtggttc 300  
 gtggctttct agggcaggca caacttgaga atgcacttac aggcattggac ttggtcgtta 360  
 tacctgctgg tgtgccgagg aaacctggaa tgacaaggga tgacttattt aagataaatg 420  
 ctggaattgt gaggactctt tctgaaggaa ttgtcaagag ctgtcctaata gcaattgtca 480  
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 ccggnacata tgatccaaaa cnaacttttaa gggttacaac cctngatgtt gngagggcaa 600  
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 agggccccc n ggantacaan attacccttt ttt 693

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<400> 283  
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cgggattcaa agtagcaatc ttgggggctg ctggtggaat tggatcaatcc ctttctttgc	180
tggtgaagat caatccattg gtttcagttc ttcattctta tgatgttggtc aacactcctg	240
gtgtcactgc tgatgttagt cacattgaca ccggtgctgt gggttcgtggc tttctagggc	300
aggcacaact tgagaatgca cttacaggca tggacttggt cgttatacct gctggtgtgc	360
cgaggaaacc tggaatgaca agggatgact tatttaagat aaatgctgga attgtgagga	420
ctcttagcga aggaattgcc aagagctgtc ctaatgcaat tgtcaacttg attagcaatc	480
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caaagcgact tttag	555

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 <212> DNA  
 <213> Trifolium repens

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<222> (446)..(446)

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gaggaaacct ggaatgacaa gggatgactt atttaagata aatgctggaa ttgtgaggac 120

tcttagcgaa ggaattgcca agagctgtcc taatgcaatt gtcaacttga ttagcaatcc 180

agtgaattcc actgtgccaa ttgctgctga ggttttcaag aaagccggta catatgattc 240

aaagcgactt ttaggggtaa caaccctcga tgttgtgagg gcaaatacct ttgtggcaga 300

agtacttggt gttgatccaa gagagggtga tgttccagng gtaggatggc acgcangagt 360

acaatattac ctcttttgtc acaggtttaag cctnccagta ncttaccgna gaanaaacgg 420

aatacctgac anancgnatt caaaanggcg gaacacaagt cgttgaggca aag 473

<210> 285

<211> 598

<212> DNA

<213> Trifolium repens

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<223> n is a, c, g, or t

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aggagtcaca atattacctc ttttgtcaca ggttaagcct cccagtagct tctactgcaga 180

agaaaccgaa tacctgacaa atcgcatcca aaatgggtgga acagaagttg ttgaggcaaa 240

ggctggggct ggctcggcaa cactantaat ggcatatgca gctgccaaagt ttgctaacgc 300

atgcctccgt ggcttgaaag gagaagccgg gatagtggag tgtgcttttg ttgattctca 360

ggttacggaa cttcctttct ttgcagccaa ggttcgtctt ggtcgcggtg gagcagaaga	420
gatataccaa cttgggtcccc ttaatgagta tgagaggatt gggttggaaa aagcgaagaa	480
tgagttagcg ggaagcatcc agaagggagt agaattcatc agaaaataag tcagataagg	540
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<210> 286  
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<220>  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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tttggtgatt ctgaggttac ggaacttcct ttctttgcag ccaagggttcg tcttggtcgc	180
gggtggagcag aagagatata tcaacttggt ccccttaatg agtatgagag gattggatta	240
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aaanaa	306

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 tgattctcag gttacggaac ttcctttctt tgcagccaag gttcgtcttg gtcgcggtgg 180  
 agcagaagag atatatcaac ttggtcccct taatgagtat gagaggattg gattagaaaa 240  
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<210> 288  
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<220>  
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 <223> n is a, c, g, or t

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 ttatggagcc aaattcagat gcaaataaac gaatcgcaag aatctccggc cacctaaatc 120

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ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg      180
caaaagggtg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataggtc      240
aacctctttc aatgttgatg aagatgaatc ctttggttn agttcttcat ctttatgatg      300
ttgttaatac tcctggtggt acttctgata ttagtcatat ggatactgct gctgttgttc      360
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acgtgattag taatccggtt aactccactg tccccattgc ggctgaagtt ttcaaaagag      600
ccggtactta tgatccaag agacttttgg gagtgacaat gcttgatgtg gttcgggccca      660
atacgtttgt ggctgaagtt cttggtcttg atccaagga tgtggatgtc ccagttgtcg      720
gaggacatgc cggaatcacc attttacctc tgctttctca ggttaaacca cattcctctt      780
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His Leu Asn Pro Pro Asn Phe Lys Met Asn Glu His Gly Asp Ser Ser
          20           25           30

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Leu Thr Ser Phe His Cys Arg Ala Lys Gly Gly Ala Pro Gly Phe Lys
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Val Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ser Met
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Leu Met Lys Met Asn Pro Leu Val Xaa Val Leu His Leu Tyr Asp Val
65           70           75           80

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Val Asn Thr Pro Gly Val Thr Ser Asp Ile Ser His Met Asp Thr Ala
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Ala Val Val Arg Gly Phe Leu Gly Gln Asn Gln Leu Glu Asp Ala Leu  
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 Thr Gly Met Asp Leu Val Ile Ile Pro Ala Gly Val Pro Arg Lys Pro  
 115 120 125  
 Gly Met Thr Arg Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys  
 130 135 140  
 Thr Leu Cys Glu Ala Ile Ala Lys Arg Cys Pro Lys Ala Ile Val Asn  
 145 150 155 160  
 Val Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val  
 165 170 175  
 Phe Lys Arg Ala Gly Thr Tyr Asp Pro Lys Arg Leu Leu Gly Val Thr  
 180 185 190  
 Met Leu Asp Val Val Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly  
 195 200 205  
 Leu Asp Pro Arg Asp Val Asp Val Pro Val Val Gly Gly His Ala Gly  
 210 215 220  
 Ile Thr Ile Leu Pro Leu Leu Ser Gln Val Lys Pro His Ser Ser Phe  
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 ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg 180  
 caaaaggtgg agcacctgga ttcaaagttg caatttttagg tgctgctggt ggcataaggc 240  
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 tgttaatact cctggtgtta cttctgatat tagtcacatg gatactggtg ctggtgttcg 360  
 aggatTTTTTg gggcaaaatc agcttgagga tgcacttaca ggtatggatt tggtaatcat 420  
 tcctgctggt gttccccgta aacctggaat gacaagagat gatctcttca atataaatgc 480  
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 gctgttggtc gaggggtttt ggggcaaaat cagcttgagg atgcacttac aggtatggat 180  
 ttggtaatca ttctgcccgg tgttccccgt aaacctggaa tgacaagaga tgatctcttc 240  
 aatataaatg ccgggatcgt taaaacactc tgtgaagcaa ttgcaaagcg atgtcctaag 300  
 gcgattgtca acgtgattag taatccggtt aactccactg tccccattgc ggctgaagtt 360  
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gttcggggcca atacgtttgt ggctgaagtt cttggtcttg atccaaggga tgtggatgtc	480
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acttacaggt atggatttgg taatcattcc tgccggtgtt ccccgtaaac ctggaatgac	180
aagagatgat ctcttcaata taaatgccgg gatcgtaaaa acactctgtg aagcaattgc	240
aaagcgatgt cctaaggcgg ttgtcaacgt gattagtaat ccggttaact ccaactgtccc	300
cattgcggct gaagttttca aaagagccgg tacttatgat cccaagagac ttttgggagt	360
gacaatgctt gatgtggttc gggccaatac gtttgtggct gaagttcttg gtcttgatcc	420
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ttctcagggt aaaccacatt cctctttcac gacaaaggaa attgagtact tgacagatcg	540
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tgctgcagga caaattggnt atgctcttgn tccaatgatt gcaagaggga tgatgctagg 240  
cccaaataca cctggaattc tTcatatgct ngatattgaa ccaggattag aggcccttaa 300  
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tacggatgtt gttgaagcat gcaaggatgt taacattgct gttatgcttg gtggatcccc 420  
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tcaagcttca gctttggagg agcatgctgc tgcagattgt aaagtgctag tggtagccaa 540  
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Thr Gly Ala Ala Gly Gln Ile Xaa Tyr Ala Leu Xaa Pro Met Ile Ala  
20 25 30

Arg Gly Met Met Leu Gly Pro Asn Gln Pro Gly Ile Leu His Met Xaa  
35 40 45

Asp Ile Glu Pro Gly Leu Glu Ala Leu Lys Gly Val Lys Met Glu Leu  
50 55 60

Ile Asp Gly Ala Phe Pro Leu Leu Arg Gly Val Val Ala Thr Thr Asp  
Page 272

65		70		75		80									
Val	Val	Glu	Ala	Cys	Lys	Asp	Val	Asn	Ile	Ala	Val	Met	Leu	Gly	Gly
				85					90					95	
Ser	Pro	Arg	Lys	Glu	Gly	Met	Glu	Arg	Lys	Asp	Val	Met	Ser	Lys	Asn
			100					105					110		
Val	Ser	Ile	Tyr	Lys	Ala	Gln	Ala	Ser	Ala	Leu	Glu	Glu	His	Ala	Ala
		115					120					125			
Ala	Asp	Cys	Lys	Val	Leu	Val	Val	Ala	Asn	Pro	Ala	Asn	Thr	Asn	Ala
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145					150					155					

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 gatacatgtg tgggtcttctc aaagttgata aggaaccagt cactgtattg gtcactgggtg 180  
 ctgcaggaca aattggntat gctcttgntn caatgattgc nanagggatg atgctangnc 240  
 caaatcnacc tgggnattggt gatatgctng ntnttg 276

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 caggacaaat tggttatgct cttgttccaa tgattgcaag agggatgatg ctaggcccaa 240  
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 tgaagatgga actgattgat ggtgctttcc cacttcttag aggtgttggt gctactacgg 360  
 atgttggtga agcatgcaag gatgttaaca ttgctgttat gcttggtgga tccccaagga 420  
 aggaaggaat ggaaagaaaa gatgtaatgt ctaagaatgt ttcaatttac aaggctcaag 480

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ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg	180
caaaagggtg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataggtc	240
aacctctttc aatgttgatg aagatgaatc ctttggttn agttcttcat ctttatgatg	300
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 35 40 45

Val Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ser Met  
 50 55 60

Leu Met Lys Met Asn Pro Leu Val Xaa Val Leu His Leu Tyr Asp Val  
 65 70 75 80

Val Asn Thr Pro Gly Val Thr Ser Asp Ile Ser His Met Asp Thr Ala  
 85 90 95

Ala Val Val Arg Gly Phe Leu Gly Gln Asn Gln Leu Glu Asp Ala Leu  
 100 105 110

Thr Gly Met Asp Leu Val Ile Ile Pro Ala Gly Val Pro Arg Lys Pro  
 115 120 125

Gly Met Thr Arg Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys  
 130 135 140

Thr Leu Cys Glu Ala Ile Ala Lys Arg Cys Pro Lys Ala Ile Val Asn  
 145 150 155 160

Val Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val  
 165 170 175

Phe Lys Arg Ala Gly Thr Tyr Asp Pro Lys Arg Leu Leu Gly Val Thr  
 180 185 190



Met Leu Asp Val Val Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly  
 195 200 205

Leu Asp Pro Arg Asp Val Asp Val Pro Val Val Gly Gly His Ala Gly  
 210 215 220

Ile Thr Ile Leu Pro Leu Leu Ser Gln Val Lys Pro His Ser Ser Phe  
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 ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg 180  
 caaaagggtg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataaggtc 240  
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 tcctgctggt gttccccgta aacctggaat gacaagagat gatctcttca atataaatgc 480

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 gttcggggcca atacgtttgt ggctgaagtt cttgggtcttg atccaaggga tgtggatgtc 480  
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acttacaggt atggatttgg taatcattcc tgccggtggt ccccgtaaac ctggaatgac 180
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aaagcgatgt cctaaggcgg ttgtcaacgt gattagtaat ccggttaact ccaactgtccc 300
cattgcggtc gaagttttca aaagagccgg tacttatgat cccaagagac ttttgggagt 360
gacaatgctt gatgtggttc gggccaatac gtttgtggct gaagttcttg gtcttgatcc 420
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ttctcaggtt aaaccacatt cctctttcac gacaaaggaa attgagtact tgacagatcg 540
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aacttcttca taaagtgtta ggtttttttt tattactctt ttcaagaacc acaaaaacag 180
tgtttcttga attctttgga attttttttt tcctgcaacc atggccttgg cacacttaaa 240
caacccact tgctcaaaaa ctcaacttca ctcatcacia ctctcatttc tctctaggac 300
tctccctagg caatatcact gtacttttgc accacttcac agaactcaac atggcagaat 360
tacttgttct gttgcaccaa atcaagtgca ggctccagct gtacaatcac aggatcccaa 420
gaataagcct gattgctatg gtgtcttctg ctttacctat gatttgaagg ctgaagagga 480
gacaaaatcc tggaagaaat taatcaacat tgcagtctca ggtgctgctg gaatgatttc 540
caatcatcta cttttcaagc ttgcatctgg tgaagttttt ggcccaaadc aacctattgc 600
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<213> Trifolium repens

<400> 303

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His Ser Ser Gln Leu Ser Phe Leu Ser Arg Thr Leu Pro Arg Gln Tyr  
20 25 30  
His Cys Thr Phe Ala Pro Leu His Arg Thr Gln His Gly Arg Ile Thr  
35 40 45  
Cys Ser Val Ala Pro Asn Gln Val Gln Ala Pro Ala Val Gln Ser Gln  
50 55 60  
Asp Pro Lys Asn Lys Pro Asp Cys Tyr Gly Val Phe Cys Leu Thr Tyr  
65 70 75 80  
Asp Leu Lys Ala Glu Glu Glu Thr Lys Ser Trp Lys Lys Leu Ile Asn  
85 90 95  
Ile Ala Val Ser Gly Ala Ala Gly Met Ile Ser Asn His Leu Leu Phe  
100 105 110  
Lys Leu Ala Ser Gly Glu Val Phe Gly Pro Asn Gln Pro Ile Ala Leu  
115 120 125  
Lys Leu Leu Gly Ser Glu Arg Ser Phe Gln Ala Leu Glu Gly  
130 135 140

<210> 304  
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<213> Trifolium repens

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<223> n is a, c, g, or t

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acttcttcat aaagtgttat ttttttttat tactcttttc aagaatcaca aaaacagtgt 180

ttcttgaatt ctttgtaatt ttttttttcc tgcaaccatg gccttggcac agttaaacaa	240
tcccacttgc tcaaaaactc aacttcactc atcacaaactc tcatttttgt ctaggactct	300
ccctaggcaa tatcactgta cttttgcacc acttcacaga actcaacatg gcagaattac	360
ttgtttctgtt gcaccaaatc aagtgcaggc tccagctgta caatcacagg atcccaagaa	420
taagcctgat tgctatggtg tcttctgcct tacctatgat ttgaaggctg aagaggagac	480
aaaatcctgg aagaaattaa tcaacattgc agtctcaggt gctgctggaa tgatttccaa	540
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ga	602

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aaccacaaaa acagtgtttc ttgaattctt ggaattttttt tttcctgcaa ccatggcttt	180
ggcacactta aacaacccca ctgtctcaaa aactcaactt cattcatcac agctctcatt	240
tctctctagg actctcccta ggcaatatca ctgtactttt gcaccacttc acagaactca	300
acatggcaga attacttggt ctgttgcacc aaatcaagtg caggctccag ctgtacaatc	360
acaggatccc aagaataagc ctgattgcta tgggtgtcttc tgccttacct atgatttgaa	420
ggctgaagag gagacaaaat cctggaagaa attaataaac attgcagtct cagggtgctgc	480
tggaatgatt tccaatcatc tacttttcaa gcttgcattt ggtgaagttt ttggcccaaa	540
tcaacctatt gcgctgaaat tattaggatc agaaagggtc ttccaagctc ttgaagggtg	599

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ttttgcgagg cagggaaaag ctctaaatgc agtcgcatct cgcaatgtca aagttatagt 120  
tgtgggaaac ctttgcaata caaatgcatt aatatgcttg aagaatgctc caaatattcc 180  
tgcaaaaaat tttcatgctt taaccggtt agatgagaac agagcaaaat gtcagctagc 240  
cctcaaggca ggtgtcttct acgataaagt gtcgaatatg acgatatggg gaaaccactc 300  
aactactcag gtccccgatt tcttaaagtc cagaatcgat ggtttgcttg tcaaagaagt 360  
gattaaggat caaaagtggg tagaggaaga gttcaccgaa aaagttcaaa agagaggtgg 420  
cgtgcttatt caaaagtggg gaagatcgct tgctgcatca acttctgtgt cgatagttga 480  
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tacagctgga aatccttatg gaatagctg 569

<210> 307  
<211> 189  
<212> PRT  
<213> Trifolium repens

<220>  
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<223> Xaa can be any naturally occurring amino acid

<400> 307

Gln Ser Xaa Xaa Xaa Pro Gly Val Glu Arg Ala Ala Leu Leu Asp Ile  
1 5 10 15

Asn Gly Gln Ile Phe Ala Glu Gln Gly Lys Ala Leu Asn Ala Val Ala  
20 25 30

Ser Arg Asn Val Lys Val Ile Val Val Gly Asn Pro Cys Asn Thr Asn  
35 40 45

Ala Leu Ile Cys Leu Lys Asn Ala Pro Asn Ile Pro Ala Lys Asn Phe  
50 55 60

His Ala Leu Thr Arg Leu Asp Glu Asn Arg Ala Lys Cys Gln Leu Ala  
65 70 75 80

Leu Lys Ala Gly Val Phe Tyr Asp Lys Val Ser Asn Met Thr Ile Trp  
Page 282

	85		90		95
Gly Asn His	Ser Thr Thr Gln Val	Pro Asp Phe Leu Asn	Ala Arg Ile		
	100	105	110		
Asp Gly Leu	Pro Val Lys Glu Val	Ile Lys Asp Gln Lys	Trp Leu Glu		
	115	120	125		
Glu Glu Phe Thr	Glu Lys Val Gln Lys Arg	Gly Gly Val Leu Ile	Gln		
	130	135	140		
Lys Trp Gly Arg Ser	Ser Ala Ala Ser Thr	Ser Val Ser Ile Val	Asp		
	145	150	155	160	
Ala Ile Arg Ser	Leu Ile Thr Pro Thr	Pro Glu Gly Asp Trp	Phe Ser		
	165	170	175		
Thr Gly Val Tyr	Thr Ala Gly Asn Pro Tyr Gly Ile Ala				
	180	185			

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tcttctcgt cgacaagacc aacttccta agatgttccg ccgccacccc atccaccaa	240
aatcctaca aaatcactct tcttccgggt gatggcatag gtcctgaagt cgtttccgtc	300
gctaaagacg ttcttctcct cactggatcc atccatggga ttaaacttga gtttcaagag	360
aagcttttgg gtggtgctgc tcttgatgct actggagttc ctttacctga tgatactctt	420
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 <211> 144  
 <212> PRT  
 <213> Trifolium repens

<400> 309

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Phe Arg Ser Ser Ser Ser Thr Arg Pro Thr Ser Leu Arg Cys Ser Ala  
20 25 30

Ala Thr Pro Ser Thr Lys Lys Ser Tyr Lys Ile Thr Leu Leu Pro Gly  
35 40 45

Asp Gly Ile Gly Pro Glu Val Val Ser Val Ala Lys Asp Val Leu Leu  
50 55 60

Leu Thr Gly Ser Ile His Gly Ile Lys Leu Glu Phe Gln Glu Lys Leu  
65 70 75 80

Leu Gly Gly Ala Ala Leu Asp Ala Thr Gly Val Pro Leu Pro Asp Asp  
85 90 95

Thr Leu Ser Val Ala Lys Gln Ser Asp Ala Val Leu Leu Gly Ala Ile  
100 105 110

Gly Gly Tyr Lys Trp Asp Lys Asn Glu Lys Gln Leu Lys Pro Glu Thr  
115 120 125

Gly Leu Leu Gln Leu Arg Glu Gly Leu Gln Val Phe Ala Asn Leu Arg  
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<210> 310

<211> 713

<212> DNA

<213> Trifolium repens

<220>

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<222> (2)..(3)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (9)..(9)

<223> n is a, c, g, or t

<220>

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<223> n is a, c, g, or t

<220>

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<222> (713)..(713)

<223> n is a, c, g, or t



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acagtttggt gagaattagg aagagcatgt ccgggtggaa cgcttcgggt ggttcctcta 180
tttgaaactg tgcaagacct gagaggagct ggtgcagtta tcagaaaact tttatcaatc 240
gattggtacc gccaacacat cattaagaac cataacggac accaagaggt tatggtcggt 300
tattctgatt ctggtaaaga tgccgggcgc tttactgctg cttgggaact ttacaaagct 360
caagaggatg tagtggtgctc ttgcaataag tacgatacta aggttacttt gttccacggc 420
cgcggaggga gtattggacg tggcggaggc ccaacatata tggctattca gtcccagcca 480
cctggctctg tgatgggaac ctttcggtca actgagcagg gagagatggt gcaggccgag 540
tttgggttgc cacagacagc agttagacaa cttgaaatat acacaacagc tgtgctactt 600
gctacacgtc gtccaccact cccacctcga gaagaaaaat ggcgtaatct aatggaagac 660
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<212> PRT
<213> Trifolium repens

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<223> Xaa can be any naturally occurring amino acid

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<220>
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<223> Xaa can be any naturally occurring amino acid

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<220>
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<223> Xaa can be any naturally occurring amino acid

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<400> 311

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Xaa Thr Xaa Pro Asn Ala Ala Glu Leu Gly Ser Asp Ser Leu Gly Ala
1          5          10          15

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Tyr Val Ile Ser Met Ala Ser Ser Ala Ser Asp Val Leu Ala Val Glu
20          25          30

```

```

Leu Leu Gln Lys Asp Ala Arg Leu Thr Val Cys Gly Glu Leu Gly Arg
35          40          45

```

```

Ala Cys Pro Gly Gly Thr Leu Arg Val Val Pro Leu Phe Glu Thr Val
50          55          60

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Gln Asp Leu Arg Gly Ala Gly Ala Val Ile Arg Lys Leu Leu Ser Ile  
 65 70 75 80  
 Asp Trp Tyr Arg Gln His Ile Ile Lys Asn His Asn Gly His Gln Glu  
 85 90 95  
 Val Met Val Gly Tyr Ser Asp Ser Gly Lys Asp Ala Gly Arg Phe Thr  
 100 105 110  
 Ala Ala Trp Glu Leu Tyr Lys Ala Gln Glu Asp Val Val Ala Ala Cys  
 115 120 125  
 Asn Lys Tyr Asp Thr Lys Val Thr Leu Phe His Gly Arg Gly Gly Ser  
 130 135 140  
 Ile Gly Arg Gly Gly Gly Pro Thr Tyr Leu Ala Ile Gln Ser Gln Pro  
 145 150 155 160  
 Pro Gly Ser Val Met Gly Thr Leu Arg Ser Thr Glu Gln Gly Glu Met  
 165 170 175  
 Val Gln Ala Glu Phe Gly Leu Pro Gln Thr Ala Val Arg Gln Leu Glu  
 180 185 190  
 Ile Tyr Thr Thr Ala Val Leu Leu Ala Thr Arg Arg Pro Pro Leu Pro  
 195 200 205  
 Pro Arg Glu Glu Lys Trp Arg Asn Leu Met Glu Asp Xaa Ser Lys Ile  
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 Ser Cys Gln Ser Tyr Arg Ser Val Val Tyr Glu Asn Pro  
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<220>  
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 <223> n is a, c, g, or t

<220>  
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ctgctattgg agagttcgga agagcatgtc ctggtggaac gttgcgggtt gtccctctat 180  
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gcagttatca gaaaactttt atcaatcgat tggtagccgc aacacatcat taagaacat 180  
aacggacacc aagaggttat ggtcggttat tctgattctg gtaaagatgc cgggcgcttt 240  
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acatatctgg ctattcagtc ccagccacct ggctctgtga tgggaaccct tcggtcaact 420  
gagcagggag agatggtgca ggccgagttt gggttgccac agacagcagt tagacaactt 480  
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<210> 314

<211> 619  
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<213> Trifolium repens

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gtggaacgct tcgggtggtt cctctatttg aaactgtgca agacctgaga ggagctggtg 120  
cagttatcag aaaacttttta tcaatcgatt ggtaccgcca acacatcatt aagaaccata 180  
acggacacca agaggttatg gtcggttatt ctgattctgg taaagatgcc gggcgcttta 240  
ctgctgcttg ggaactttac aaagctcaag aggatgtagt ggctgcttgc aataagtacg 300  
atactaaggt tactttgttc cacggccgcg gagggagtat tggacgtggc ggaggcccaa 360  
catatctggc tattcagtcc cagccacctg gctctgtgat ggggaaccctt cggtaactg 420  
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gatttcttga ggcaagtttc cacttttgga ctgtcactgg taagacttga tataaggcaa 240  
gagtcagatc gtcacacgga cgtgatggat gccattacca aacatttgga aattggatcc 300  
taccaagact ggtctgaaga aaaaagacag gaatggcttt tgtctgagtt gggttgcaaa 360  
aggccgcttt ttggacctga cctacctcaa accgatgaaa ttagagaagt ttagagaca 420

tttcatgtca tagcagaact tccatcagac aactttggag cctatatcat ttcgatggca 480  
 actgccccgt ctgatgtgct agcggttgaa cttcttcaac gtgaatgcaa aatcaagaat 540  
 ccgttaagag ttgttccgtt gtttgagaaa cttgctgata tcgagtctgc tcctgctg 598

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 <211> 199  
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 <400> 316

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 20 25 30

Asp Glu Phe Leu Glu Pro Leu Glu Leu Cys Tyr Arg Ser Leu Cys Ala  
 35 40 45

Cys Gly Asp Arg Ala Ile Ala Asp Gly Ser Leu Leu Asp Phe Leu Arg  
 50 55 60

Gln Val Ser Thr Phe Gly Leu Ser Leu Val Arg Leu Asp Ile Arg Gln  
 65 70 75 80

Glu Ser Asp Arg His Thr Asp Val Met Asp Ala Ile Thr Lys His Leu  
 85 90 95

Glu Ile Gly Ser Tyr Gln Asp Trp Ser Glu Glu Lys Arg Gln Glu Trp  
 100 105 110

Leu Leu Ser Glu Leu Val Gly Lys Arg Pro Leu Phe Gly Pro Asp Leu  
 115 120 125

Pro Gln Thr Asp Glu Ile Arg Glu Val Leu Glu Thr Phe His Val Ile  
 130 135 140

Ala Glu Leu Pro Ser Asp Asn Phe Gly Ala Tyr Ile Ile Ser Met Ala  
 145 150 155 160

Thr Ala Pro Ser Asp Val Leu Ala Val Glu Leu Leu Gln Arg Glu Cys  
 165 170 175

Lys Ile Lys Asn Pro Leu Arg Val Val Pro Leu Phe Glu Lys Leu Ala  
180 185 190

Asp Leu Glu Ser Ala Pro Ala  
195

<210> 317  
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<212> DNA  
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<223> n is a, c, g, or t

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ctatgctaca gatcactctg tgcttggtgat gatcgtgcga ttgccgatgg aagccttctt 180  
gatttcttga ggcaagtttc cacttttgga ctgtcactgg taagacttga tataaggcaa 240  
gagtcagatc gtcacacgga cgtgatggat gccattacca aacatttgga aattggatcc 300  
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aggccgcttt ttggacctga cctacctcaa accgatgaaa ttagagaagt tttagagaca 420  
tttcatgtca tagcagaact tccatcagac aactttggag cctatatcat ttcgatggca 480  
actgccccgt ctgatgtgct agcggttgaa cttcttcaac gtgaatgcaa aatcaagaat 540  
ccgttaagag ttgttccggt gtttgagaaa cttgctgac tcgagtctgc tcctgctg 598

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<212> DNA  
<213> Trifolium repens

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ctatgctaca gatcactctg tgcttggtgat gatcgtgcga ttgccgatgg aagccttctt 180  
gatttcttga ggcaagtttc cacttttgga ctgtcactgg taagacttga tataaggcaa 240  
gagtcagatc gtcacacgga cgtgatggat gccattacca aacatttgga aattggatcc 300

taccaagact ggtctgaaga aaaaagacag gaatggcttt tgtctgagtt ggttggcaaa 360  
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 actgccccgt ctgatgtgct agcggttgaa cttcttcaac gtgaatgcaa aatcaagaat 540  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 cacaaattgc tgtaggttt cgtagtactt tcccgtagaa tccatagtat cttggaggaa 120  
 caaactagat tttccaccta ggtagtcacg agattttcct cttcactatt tttctttttc 180  
 atataataac tcaacacttt tttagctac ttactagtag tgtgtaacac aaattttatt 240  
 cattatggct actcctcgca acattgaaaa aatggcttca attgatgctc aattgagact 300  
 actagacca aggaaagttt ctgatgatga taaacttgct gagtatgatg ctttggttatt 360  
 ggatcgattc cttgacattc ttcaagattt gcatggagaa gatatcagac aaactgttca 420  
 agattgttat gagttatcgg cagagtatga aggggagctt aagccggaga aattggaggaa 480  
 acttggaat atgcttactg gtcttgatgc tggagattct attgttatag caaatcatt 540  
 ttctcatatg cttaatttgg caaacttggc agagn 575

<210> 320  
 <211> 110  
 <212> PRT  
 <213> Trifolium repens

<400> 320

Met Ala Thr Pro Arg Asn Ile Glu Lys Met Ala Ser Ile Asp Ala Gln  
 1 5 10 15

Leu Arg Leu Leu Ala Pro Arg Lys Val Ser Asp Asp Asp Lys Leu Val  
 20 25 30

Glu Tyr Asp Ala Leu Leu Leu Asp Arg Phe Leu Asp Ile Leu Gln Asp  
35 40 45

Leu His Gly Glu Asp Ile Arg Gln Thr Val Gln Asp Cys Tyr Glu Leu  
50 55 60

Ser Ala Glu Tyr Glu Gly Glu Leu Lys Pro Glu Lys Leu Glu Glu Leu  
65 70 75 80

Gly Asn Met Leu Thr Gly Leu Asp Ala Gly Asp Ser Ile Val Ile Ala  
85 90 95

Lys Ser Phe Ser His Met Leu Asn Leu Ala Asn Leu Ala Glu  
100 105 110

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<213> Trifolium repens

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<400> 321  
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cacaaattgc tgttagggtt cgttgtactt tcccgtgcaa tccatagtat cttggaggaa 120  
caaactagat tttccaccta ggtcgtcacg agattttcct cttcactatt tttctttttc 180  
atataataac tcaacacttt ttctagctac ttactagtac tgtgtaacac aaattttatt 240  
cattatggct actcctcgca acattgaaaa aatggcttca attgatgctc aattgagact 300  
actagcacca aggaaagttt ctgatgatga taaacttgtc gagtatgatg ctttggttatt 360  
ggatcgattc cttgacattc ttcaagattt gcatggagaa gatatcagac aaactgttca 420  
agattgttat gagttatcgg cagagtatga aggggagctt atgccggaga aattggagga 480  
acttggaat atgcttactg gtcttgatgc tggagattct attgttatag caaatcatt 540  
ttctcatatg cttaatttgg caaacttggc agagn 575

<210> 322  
<211> 537  
<212> DNA  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<400> 322  
 tgacaaacna tatctccctt tctctaactc cgtgatcaag gcgtagtta gttacacaaa 60  
 ttgctgtag gtttcgttgt actttcccgt gcaatccata gtatcttgga ggaacaaact 120  
 agattttcca cctaggttgt cacgagattt tcctcttcac tatttttctt tttcatataa 180  
 taattcaaca ctttttctag ctacttacta gtactgtgta acacaaattt tattcattat 240  
 ggctactcct cgcaacattg aaaaaatggc ttcaattgat gctcaattga gactactagc 300  
 accaaggaaa gtttctgatg atgataaact tgtcgagtat gatgctttgt tattggatcg 360  
 attccttgac attcttcaag atttgcattg agaagatatt agacaaactg ttcaagattg 420  
 ttatgagtta tcggcagagt atgaagggga gcttaagccg gagaaattgg aggaacttgg 480  
 gaatatgctt actggtcttg atgctggaga ttctattggt atagcaaaat cattttt 537

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<400> 323

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tgaagagctt catagatcct caaagaaaga tgcaaaacat tatattgagt tttggaaaca 120

gattcctcca aacgagccat atcgtgttat tcttgagggt gtgagggaca aactgtataa 180

tacacgtgaa cgtgctcgac agttattagc aaatggaacc tctgacatcc ttgaagagac 240

aaccttcacg aatgttgagc agtttctgga gcctcttgaa ctgtgttata ggtcactttg 300

tgcatgtggt gaccgatcaa tagcagacgg aagccttctt gatttcttgc gacaagtttc 360

tacatttggga ctttcacttg taagactcga catccgtcaa gagtcagaca ggcacacaga	420
cgttatggat gcaattacaa aacacttggga gattggatct taccgagaat ggtcggaaga	480
acgcaggcag gaatggctct tgtctgagct tagtggaataa cgccctctct tcggccatga	540
tcttcctaag acagaagaaa ttgccgatgt ttagataacc ttncacgtna tttcanaact	600
tncctcanat agctttggtg cctatatcat ctcaatggca acctcccat ctgatgtgct	660
agctgtcgag cttttacaac gtgaatgtca tgtgaagcag ccgttaanag ttgttcact	720
gtttgaaaag ctcgccngtc ttgagctctgc tcctgctgcg gnagcgcgtt tttnttaga	780
ttgggncana accgnnntaa tggaaagcag aagtntgat aggtactcan actngggaaa	840
agatgctggc cgnn	854

<210> 324  
 <211> 284  
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 <213> Trifolium repens

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<223> Xaa can be any naturally occurring amino acid

<400> 324

Glu Asp Leu Met Phe Glu Leu Ser Met Trp Arg Cys Asn Asp Glu Leu  
1 5 10 15

Arg Val Arg Ala Glu Glu Leu His Arg Ser Ser Lys Lys Asp Ala Lys  
20 25 30

His Tyr Ile Glu Phe Trp Lys Gln Ile Pro Pro Asn Glu Pro Tyr Arg  
35 40 45

Val Ile Leu Gly Gly Val Arg Asp Lys Leu Tyr Asn Thr Arg Glu Arg  
50 55 60

Ala Arg Gln Leu Leu Ala Asn Gly Thr Ser Asp Ile Leu Glu Glu Thr  
65 70 75 80

Thr Phe Thr Asn Val Glu Gln Phe Leu Glu Pro Leu Glu Leu Cys Tyr  
85 90 95

Arg Ser Leu Cys Ala Cys Gly Asp Arg Ser Ile Ala Asp Gly Ser Leu  
100 105 110

Leu Asp Phe Leu Arg Gln Val Ser Thr Phe Gly Leu Ser Leu Val Arg  
115 120 125

Leu Asp Ile Arg Gln Glu Ser Asp Arg His Thr Asp Val Met Asp Ala  
 130 135 140  
 Ile Thr Lys His Leu Glu Ile Gly Ser Tyr Arg Glu Trp Ser Glu Glu  
 145 150 155 160  
 Arg Arg Gln Glu Trp Leu Leu Ser Glu Leu Ser Gly Lys Arg Pro Leu  
 165 170 175  
 Phe Gly His Asp Leu Pro Lys Thr Glu Glu Ile Ala Asp Val Leu Asp  
 180 185 190  
 Thr Xaa His Xaa Ile Ser Xaa Leu Xaa Ser Xaa Ser Phe Gly Ala Tyr  
 195 200 205  
 Ile Ile Ser Met Ala Thr Ser Pro Ser Asp Val Leu Ala Val Glu Leu  
 210 215 220  
 Leu Gln Arg Glu Cys His Val Lys Gln Pro Leu Xaa Val Val Pro Leu  
 225 230 235 240  
 Phe Glu Lys Leu Ala Xaa Leu Glu Ser Ala Pro Ala Ala Xaa Ala Arg  
 245 250 255  
 Phe Xaa Leu Asp Trp Xaa Xaa Thr Xaa Xaa Met Glu Ser Arg Ser Xaa  
 260 265 270  
 Asp Arg Tyr Ser Xaa Xaa Gly Lys Asp Ala Gly Xaa  
 275 280

<210> 325  
 <211> 693  
 <212> DNA  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>  
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 <222> (685)..(686)  
 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 tcttactgcc tcattacacg ggtgagaagg agtgaattgc tccaatggca acaaacaaaa 120  
 tggaaaaaat ggcatacaatt gatgcacagc ttagacaatt agtaccagca aaagtttagtg 180  
 aagatgataa acttattgag tatgatgctt tggtgttgga tcggtttctt gatatccttc 240  
 aggatttaca tggagaggat ctgaaagatt ctgttcaaga agtgtatgaa ctttctgcgg 300  
 agtatgaaag aaagcatgat cctaagaaac ttgaagagct cggaaatttg ataacaagtt 360  
 tagatgcagg agattcaatt gttgttgcta agtccttttc gcacatgctt aacttggcca 420

acttagctga agaggttcag attgctcatc gtcgaaggaa caagttgaag aaaggagatt	480
ttagggatga gagcaatgca actaccgaat cagacatcga agaaactctt aagagacttg	540
tgtttaatat gaagaaatct cctcaggaag ttnttgatgc gttgaagaac cnnaccgttg	600
atttggttct tactgctcat cccactcagt ccgttcgang nccnctgctt cccnnngcct	660
ggnacgggna ccgcnctgnc taccnnactg nnn	693

<210> 326  
 <211> 196  
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 <213> Trifolium repens

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 <223> Xaa can be any naturally occurring amino acid

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 <223> Xaa can be any naturally occurring amino acid

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 <223> Xaa can be any naturally occurring amino acid

<400> 326

Met Ala Thr Asn Lys Met Glu Lys Met Ala Ser Ile Asp Ala Gln Leu  
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 Arg Gln Leu Val Pro Ala Lys Val Ser Glu Asp Asp Lys Leu Ile Glu  
 20 25 30  
 Tyr Asp Ala Leu Leu Leu Asp Arg Phe Leu Asp Ile Leu Gln Asp Leu  
 35 40 45  
 His Gly Glu Asp Leu Lys Asp Ser Val Gln Glu Val Tyr Glu Leu Ser  
 50 55 60  
 Ala Glu Tyr Glu Arg Lys His Asp Pro Lys Lys Leu Glu Glu Leu Gly  
 65 70 75 80  
 Asn Leu Ile Thr Ser Leu Asp Ala Gly Asp Ser Ile Val Val Ala Lys  
 85 90 95  
 Ser Phe Ser His Met Leu Asn Leu Ala Asn Leu Ala Glu Glu Val Gln  
 100 105 110  
 Ile Ala His Arg Arg Arg Asn Lys Leu Lys Lys Gly Asp Phe Arg Asp  
 115 120 125  
 Glu Ser Asn Ala Thr Thr Glu Ser Asp Ile Glu Glu Thr Leu Lys Arg  
 130 135 140  
 Leu Val Phe Asn Met Lys Lys Ser Pro Gln Glu Val Xaa Asp Ala Leu  
 145 150 155 160  
 Lys Asn Xaa Thr Val Asp Leu Val Leu Thr Ala His Pro Thr Gln Ser  
 165 170 175  
 Val Arg Xaa Xaa Leu Leu Pro Xaa Ala Trp Xaa Gly Xaa Arg Xaa Xaa  
 180 185 190  
 Tyr Xaa Thr Xaa  
 195

<210> 327  
 <211> 1307  
 <212> DNA  
 <213> Trifolium repens

<220>  
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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

<400> 327  
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 tataaagacc aattcaattc ccaattcttt tggatccgaa atcattcatt ctacgcgtct 120  
 tctctcttct ctgcgtttca aaccctagtt gttttgttga ttgatctaaa tggcgttctt 180  
 tcgaagcggt tctgcgtttt caaaactacg atctcgtgtg ggtcaacaac ctagtcttgc 240  
 taattcagtt agatggctcc aaactccaag ctccagtaac actgatcttt attctgagat 300  
 gaaggagcta gttccagagt atcaggaacg tgtaagaag ttgaagaaag accatggaag 360  
 tgttgaattg ggaaaaatca cagctgatat ggtacttggg ggaatgagag gaatgactgc 420  
 tttagtgtgg ctaggctcag ctgttgaccc agatgagggg attcgcttta ggggcatgac 480  
 aattcctgac tgccagaaaa cacttccagg tgcttttcct ggtggggagc ctttgcccga 540  
 ggctatactg tggcttctat tgaccggaaa ggtaccaagt aaagagcaag tagattcatt 600  
 agctcacgaa ttgcgaagtc gtgcaaaaat cccagagtat gcttacaagg caattgatgc 660  
 actgcctgtt tctgctcatc caatgacaca atttagtact ggtgtaatgg ccctccaggt 720  
 ggagagttag ttacaaagg catacgagag tgggatacat aagtcaaggt attgggagcc 780  
 aacttatgag gatagcttga atttaattgc tcgtttgcct ggaattgctg cctatattta 840  
 tcgacggata tacaaggatg gaaaaatcat accattggat gattctttgg attatggtgc 900  
 aaactatgct cacatgttag gatttgatga tccagaaacg ctggagttaa tgaggctgta 960  
 tatttctatc catagtgatc atgaaggngg caacgttagt tctcacacag ctcacctagt 1020

tgctagttca ctatcagatc cttatcttgc attcgcagct gctctgaatg gtttagctgg 1080  
 cccactgcat ggttttagcca atcaggaagt tctacgatgg atcagaaaca tagttaagga 1140  
 gtttggaact ccaaacataa gtacagaaca attgagcgac tacattcata aaacattgaa 1200  
 cagtggccag gttgtgcctg gatatggaca tggagttttg cgcaatacag acccaagata 1260  
 cacttgccag agggagtttg cattgaagca tttgcctaata gatccan 1307

<210> 328  
 <211> 378  
 <212> PRT  
 <213> *Trifolium repens*

<400> 328

Met Ala Phe Phe Arg Ser Val Ser Ala Leu Ser Lys Leu Arg Ser Arg  
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Val Gly Gln Gln Pro Ser Leu Ala Asn Ser Val Arg Trp Leu Gln Thr  
20 25 30

Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val  
35 40 45

Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser  
50 55 60

Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg  
65 70 75 80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu  
85 90 95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu  
100 105 110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp  
115 120 125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu  
130 135 140

Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys  
145 150 155 160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser  
165 170 175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr  
180 185 190

Glu Ser Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp  
 195 200 205  
 Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr  
 210 215 220  
 Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu  
 225 230 235 240  
 Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu  
 245 250 255  
 Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu  
 260 265 270  
 Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu Ser  
 275 280 285  
 Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly Pro  
 290 295 300  
 Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn Ile  
 305 310 315 320  
 Val Lys Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser Asp  
 325 330 335  
 Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr Gly  
 340 345 350  
 His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg Glu  
 355 360 365  
 Phe Ala Leu Lys His Leu Pro Asn Asp Pro  
 370 375

<210> 329  
 <211> 692  
 <212> DNA  
 <213> Trifolium repens

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<223> n is a, c, g, or t

<400> 329

gnnncncnac cattacgtta attacatttt ctncctttcgc cttgttcttt ctcttctcaa 60

tataaagacc aattcaattc ccaattcttt tggatccgaa atcattcatt ctacgcttct 120

tctctcttct ctgcgtttca aaccctagtt gttttgttga ttgatcttaa tggcgttctt 180

tcgaagcggt tctgcgttt caaaactacg atctcgtgtg ggtcaacaac ctagtcttgc 240

taattcagtt agatggctcc aaactccaag ctccagtaac actgatcttt attctgagat 300

gaaggagcta gttccagagt atcaggaacg tgtaagaag ttgaagaaag accatggaag 360

tggtgaattg ggaaaaatca cagctgatat ggtacttggt ggaatgagag gaatgactgc 420

tttagtgtgg ctaggctcag ctgttgaccc agatgagggga attcgcttta ggggcatgac 480

aattcctgac tgccagaaaa cacttccagg tgcttttcct ggtggggagc ctttgcccga 540

ggctatactg tggcttctat tgaccggaaa ggtaccaagt aaagagcaag tagattcatt 600

agctcacgaa ttgcgaagtc gtgcaaaaat cccagagtat gcttacaagg caattgatgc 660

actgcctgtt tctgctcatc caatgacaca an 692

<210> 330

<211> 588

<212> DNA

<213> Trifolium repens

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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attcccaatt cttttggatc cgaaatcatt cattctacgc ttctttctctc ttctctgcgt      120
ttcaaaccct agttgttttg ttgattgatc ttaatggcgt tctttcgaag cgtttctgcg      180
ctttcaaaac tacgatctcg tgtgggtcaa caacctagtc ttgctaattc agttagatgg      240
ctccaaactc caagctccag taacactgat ctttattctg agatgaagga gctagttcca      300
gagtatcagg aacgtgttaa gaagttgaag aaagaccatg gaagtgttga attgggaaaa      360
atcacagctg atatggtact tgggtggaatg agaggaatga ctgctttagt gtggctaggc      420
tcagctgttg acccagatga gggaattcgc tttaggggca tgacaattcc tgactgccag      480
aaaacacttc caggtgcttt tcctggtggg gagcctttgc ccgaggctat actgtggctt      540
ctattgaccg gaaaggtacc aagtaaagag caagtagatt cattagcn                      588

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<210> 331
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<212> DNA
<213> Trifolium repens

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<220>
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<223> n is a, c, g, or t

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<220>
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<222> (681)..(681)
<223> n is a, c, g, or t

<400> 331
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aaccctagtt gttttgttga ttgatctaaa tggcgtttctt tcgaagcggt tctgcgcttt    120
caaaactacg atctcgtgtg ggtcaacaac ctagtctcgc taattcagtt agatggctcc    180
aaactccaag ctccagtaac actgatcttt attctgagat gaaggagcta gttccagagt    240
atcaggaacg tgtaagaag ttgaagaaag atcatggaag tgttgaattg ggaaaagtca    300
cagctgatat ggtacttggg ggaatgagag gaatgacagc tttagtgtgg ctaggctcag    360
ctgttgaccc agatgagggg attcgcttta ggggcatgac aattcctgac tgccagaaaa    420
cacttccagg tgcttttctt ggtgggggagc ctttgccga ggctatactg tggctgccat    480
tgaccggaag ggtaccaagt aaagagcaag tagattcatt agctcacgaa ttgcgaagtc    540
gtgcaaaaat cccagagtat gcttacaagg caattgatgc actgcctgtt tctgctcatc    600
caatgacaca atttagtact ggtgtaatgg ccctccaggt ggagagtgag ttacaaaagg    660
catatgagag tgggatacat n                                                681

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<210> 332
<211> 456
<212> DNA
<213> Trifolium repens

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<220>
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<223> n is a, c, g, or t

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<220>
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<222> (12)..(13)
<223> n is a, c, g, or t

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<220>
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<222> (29)..(29)
<223> n is a, c, g, or t

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<220>
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<222> (42)..(42)
<223> n is a, c, g, or t

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<220>
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<222> (339)..(339)

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<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (405)..(405)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (417)..(417)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (423)..(423)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (426)..(426)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (441)..(441)

<223> n is a, c, g, or t

<220>

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<222> (444)..(444)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (455)..(456)

<223> n is a, c, g, or t

<400> 332

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cgttctttcg aagcgtttct gcgctttcaa aactacgata tcgtgtgggt caacaaccta 120

gtcttgctaa ttcagttaga tggctccaaa ctccaagctc cagtaacact gatctttatt 180

ctgagatgaa ggagctagtt ccagagtatc aggaacgtgt taagaagttg aagaaagacc 240

atggaagtgt tgaattggga aaaatcacag ctgatatggg acttggtgga atgagaggaa 300

tgactgcttt agtgtggcta ggctcagctg ttgaccana tgagggaatt cgctttaggg 360

gcatgacaat tcctgactgc cacaaaacac ttgcaggtgc ttttnctggc ggggagnctt 420

tgncnaggc tatactgcgg ntntattga ccggnn 456

<210> 333

<211> 601

<212> DNA

<213> *Trifolium repens*

<220>

<221> misc\_feature

<222> (2)..(2)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (601)..(601)

<223> n is a, c, g, or t

<400> 333

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gnggaaaaat acagctgata tgggtacttgg tggaatgaga ggaatgactg ctttagtggtg      60
gctagggtca gctgttgacc cagatgaggg aattcgcttt aggggcatga caattcctga      120
ctgccagaaa acatttccag gtgctcttcc tgggtggggag cctttgcccg aggctatact      180
gtggcttcta ttgaccggaa aggtaccaag taaagagcaa gtagattcat tagctcacga      240
attgcgaagt cgtgcaaaaa tcccagagta tgcttacaag gcaattgatg cactgcctgt      300
ttctgctcat ccaatgacac aatttagtac tgggtgtaatg gccctccagg tggagagtga      360
gtttacaaag gcatacgaga gtgggataca taagtcaagg tattgggagc caacttatga      420
ggatagcttg aatttaattg ctcgtttgcc tggaattgct gcctatattt atcgacggat      480
atacaaggat ggaaaaatca taccattgga tgattctttg gattatgggtg caaactatgc      540
tcacatgtta ggatttgatg atccagaaac gctggagttt atgaggctgt atatttctat      600
n                                                                           601
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<210> 334

<211> 581

<212> DNA

<213> Trifolium repens

<220>

<221> misc\_feature

<222> (2)..(2)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (33)..(33)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (581)..(581)

<223> n is a, c, g, or t

<400> 334

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tttaggggca tgacaattcc tgactgccag aaacacttcc aggtgctttt cctggtgggg      120
agcctttgcc cgaggctata ctgtggcttc tattgaccgg aaaggtacca agtaaagagc      180
aagtagattc attagctcac gaattgcgaa gtcgtgcaaa aatcccagag tatgcttaca      240
aggcaattga tgcactgcct gtttctgctc atccaatgac acaatttagt actggtgtaa      300
tggccctcca ggtggagagt gagtttaca aggcatagca gagtgggata cataagtcaa      360
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ggtattggga gccaaacttat gaggatagct tgaatttaat tgctcgtttg cctggaattg	420
ctgcctatat ttatcgacgg atatacaagg atggaaaaat catacattg gatgattctt	480
tggattatgg tgcaaactat gctcacatgt taggatttga tgatccagaa acgctggagt	540
ttatgaggct gtatatttct atccatagtg atcatgaagg n	581

<210> 335  
 <211> 559  
 <212> DNA  
 <213> Trifolium repens

<220>  
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 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (14)..(14)  
 <223> n is a, c, g, or t

<220>  
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 <222> (16)..(16)  
 <223> n is a, c, g, or t

<220>  
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 <222> (559)..(559)  
 <223> n is a, c, g, or t

<400> 335	
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gctcgtttgc ctggaattgc tgcctatatt tatcgacgga tatacaagga tggaaaaatc	120
atacatttgg atgattcttt ggattatggt gcaaactatg ctcacatggt aggatttgat	180
gatccagaaa cgctggagtt tatgaggctg tatatttcta tccatagtga tcatgaaggt	240
ggcaacgtta gttctcacac agctcaccta gttgctagtt cactatcaga tccttatctt	300
gcattcgag ctgctctgaa tggtttagct ggcccactgc atggtttagc caatcaggaa	360
gttctacgat ggatcagaaa catagttaag gagtttggaa ctccaaacat aagtacagaa	420
caattgagcg actacattca taaaacattg aacagtggcc aggttggtgcc tggatatgga	480
catggagttt tgcgcaatac agaccaaga tacacttgcc agagggagtt tgcattgaag	540
catttgccta atgatccan	559

<210> 336  
 <211> 1244  
 <212> DNA  
 <213> Trifolium repens

<220>  
 <221> misc\_feature  
 <222> (2)..(2)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (7)..(7)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (124)..(124)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (1243)..(1244)  
 <223> n is a, c, g, or t

<400> 336  
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 attactaatt actagtacta attagtaata ccgatccctt tttctcgaac ccattcattc 120  
 aagnagaaga aggaaaaaca aaatccacac aaacaaacat cttacaacaa tgtcaacgac 180  
 aactactaca accgacgaat ccaagctgca cgacgctgca cggaaccgtt tggccaccct 240  
 ctgagctcac ttgcttcctt cctccacaac ctccgccgcg ctcttccatc ctattcacct 300  
 ttctttcttcc tccgggatct ccccaccgtc taatgtcaaa ggaacactca ccgttggtga 360  
 tgaacgtacc gggaagaagt ataccattga ggtctctcct gatggcaccg ttaaagccaa 420  
 tgatttcaag aagatatcaa ctgggaagaa tgataagga ctcaaacttt atgacacctg 480  
 atatttaaac actgctcctg tgcgatcaac aatttcttat attgatggtg atgaggaat 540  
 ccttagatat agaggatacc ccattgagga gttggccgag aaaagcacct ttccggaagt 600  
 ggcatactctc atattgtatg gaaatttgcc ttctgcaaat cagttacaag aatgggaatt 660  
 tgctatatct cagcattcag ccttacctca aggagttttg gatctcatc aatcaatgcc 720  
 tcaagatgca catcctatgg gcgtcctagt gaatgcaata agcgctctgt ctgtttttca 780  
 tcctgacgca aatcctgctc tcagaggtct tgacatctac aactcaaagc aagtgagaga 840  
 caaacaata gcacggatta ttggaaagat aacaacaatt gctgctgcaa ttaatcttag 900  
 aatggcagga aggccacctg tgcttccatc caacaaacta tcttacacag agaacttcct 960  
 atacatgctt gattctctag gcaatcggtc atataaaccc aaccctcagc taactcgtgc 1020  
 actagacatc atcttcatcc tgcattgaga acatgaaatg aattgctcta catctgctgt 1080  
 acgacacctt gcatcaagcg gcgtcgatgt atacactgct attgctggag gtgttgagac 1140  
 tctgtatgga cctcttcatt gtggagctaa tgaggcggtc cttaaaatgc tgagtgaat 1200  
 tggaagtgtc gataacattc cagagttcat tgaaggtgtt aann 1244

<210> 337  
 <211> 358  
 <212> PRT  
 <213> Trifolium repens

<220>  
 <221> misc\_feature  
 <222> (358)..(358)  
 <223> Xaa can be any naturally occurring amino acid  
 <400> 337

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Ala Arg Asn Arg Leu Ala Thr Leu Ser Ala His Leu Leu Pro Ser Ser
20     25     30

Thr Thr Ser Ala Ala Leu Leu His Pro Ile His Leu Ser Ser Ser Ser
35     40     45

Gly Ile Ser Pro Pro Ser Asn Val Lys Gly Thr Leu Thr Val Val Asp
50     55     60

Glu Arg Thr Gly Lys Lys Tyr Thr Ile Glu Val Ser Pro Asp Gly Thr
65     70     75     80

Val Lys Ala Asn Asp Phe Lys Lys Ile Ser Thr Gly Lys Asn Asp Lys
85     90     95

Gly Leu Lys Leu Tyr Asp Pro Gly Tyr Leu Asn Thr Ala Pro Val Arg
100    105    110

Ser Thr Ile Ser Tyr Ile Asp Gly Asp Glu Gly Ile Leu Arg Tyr Arg
115    120    125

Gly Tyr Pro Ile Glu Glu Leu Ala Glu Lys Ser Thr Phe Pro Glu Val
130    135    140

Ala Tyr Leu Ile Leu Tyr Gly Asn Leu Pro Ser Ala Asn Gln Leu Gln
145    150    155    160

Glu Trp Glu Phe Ala Ile Ser Gln His Ser Ala Leu Pro Gln Gly Val
165    170    175

Leu Asp Leu Ile Gln Ser Met Pro Gln Asp Ala His Pro Met Gly Val
180    185    190

Leu Val Asn Ala Ile Ser Ala Leu Ser Val Phe His Pro Asp Ala Asn
195    200    205

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Pro Ala Leu Arg Gly Leu Asp Ile Tyr Asn Ser Lys Gln Val Arg Asp  
210 215 220

Lys Gln Ile Ala Arg Ile Ile Gly Lys Ile Thr Thr Ile Ala Ala Ala  
225 230 235 240

Ile Asn Leu Arg Met Ala Gly Arg Pro Pro Val Leu Pro Ser Asn Lys  
245 250 255

Leu Ser Tyr Thr Glu Asn Phe Leu Tyr Met Leu Asp Ser Leu Gly Asn  
260 265 270

Arg Ser Tyr Lys Pro Asn Pro Gln Leu Thr Arg Ala Leu Asp Ile Ile  
275 280 285

Phe Ile Leu His Ala Glu His Glu Met Asn Cys Ser Thr Ser Ala Val  
290 295 300

Arg His Leu Ala Ser Ser Gly Val Asp Val Tyr Thr Ala Ile Ala Gly  
305 310 315 320

Gly Val Gly Ala Leu Tyr Gly Pro Leu His Gly Gly Ala Asn Glu Ala  
325 330 335

Val Leu Lys Met Leu Ser Glu Ile Gly Ser Val Asp Asn Ile Pro Glu  
340 345 350

Phe Ile Glu Gly Val Xaa  
355

<210> 338  
<211> 609  
<212> DNA  
<213> Trifolium repens

<220>  
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<223> n is a, c, g, or t

<220>  
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<222> (7)..(7)  
<223> n is a, c, g, or t

<220>  
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<222> (609)..(609)  
<223> n is a, c, g, or t

<400> 338  
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attactaatt actagtacta attagtaata ccgatccctt tttctcgaac ccattcattc	120
aattcaaaga aggaaaaaca aaatcacaca aacaaacatc ttacaacaat gtcaacgaca	180
actactacaa ccgacgaatc caagctgcac gacgctgcac ggaaccgttt ggctaccctc	240
tcagctcact tgcttccttc ctccacaaac tccgctgcgc ttctccatcc tatccacctt	300
tcttcttcct ctgggatctc cccaccgtct aatgtcaaag gaacactcac cgttgttgat	360
gaacgtaccg ggaagaagta taccattgag gtctctcctg atggcaccgt taaagccaat	420
gatttcaaga agatatcaac tgggaagaat gataaggggc tcaaacttta tgatcctgga	480
tatttaaaca ctgctcctgt gcgatcaaca atttcttata ttgatggtga tgagggaatc	540
cttagatata gaggataccc cattgaagag ttggccgaga aaagcacctt tccggaagtg	600
gcatatctn	609

<210> 339  
 <211> 589  
 <212> DNA  
 <213> Trifolium repens

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <222> (5)..(5)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (16)..(16)  
 <223> n is a, c, g, or t

<220>  
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 <222> (589)..(589)  
 <223> n is a, c, g, or t

<400> 339	
gnagnagaag gaaacncaa tccacaaaca aaactcttac aacaatgtca accacaacta	60
ctacaaccga cgaatccaag ctgcacgacg ctgcacggaa ccgtttggcc accctctcag	120
ctcacttgct tccttcctcc acaacctccg ccgcgctcct ccctcctatt cacctttccg	180
cttcctccgg gatctcccca ccgtctaata tcaaaggaac actcaccgtt gttgatgaac	240
gtaccgggaa gaagtataac attgaggtct cacctgatgg caccgttaaa gccaatgatt	300
tcaagaagat atcaactggg aagaatgata agggactcaa actttatgat cctggatatt	360
taaacactgc tcctgtgcga tcaacaattt cttatattga tggatgatgag ggaatcctta	420
gatatagagg atacccatt gaggagtgg ccgagaaaag cacctttccg gaagtggcat	480

atctcatatt gtatggaaat ttgccttctg caaatcagtt acaagaatgg gaatttgcta 540  
tatctcagca ttcagcctta cctcaaggag ttttggatct catacaatn 589

<210> 340  
<211> 594  
<212> DNA  
<213> Trifolium repens

<220>  
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<223> n is a, c, g, or t

<220>  
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<223> n is a, c, g, or t

<220>  
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<223> n is a, c, g, or t

<220>  
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<222> (593)..(594)  
<223> n is a, c, g, or t

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ctactacaac cgacgaatcc aagctgcacg acgctgcacg gaaccgtttg gccaccctct 120  
cagctcactt gcttccttcc tccacaacct ccgccgcgct cctccatcct attcaccttt 180  
ccgcttcctc cgggatctcc ccaccgtcta atgtcaaagg aacactcacc gttggtgatg 240  
aacgtaccgg gaagaagtat aacattgagg tctcacctga tggcaccggt aaagccaatg 300  
atttcaagaa gatatcaact gggaagaatg ataagggact caaactttat gatcctggat 360  
atttaaacac tgctcctgtg cgatcaacaa tttcttatat tgatggtgat gagggaatcc 420  
ttagatatag aggatacccc attgaggagt tggccgagaa aagcaccttt ccggaagtgg 480  
catatctcat attgtatgga aatttgcctt ctgcaaatca gttacaagaa tgggaatttg 540  
ctatatctca gcattcagcc ttacctcaag gagttttgga tctcatacaa tcnn 594

<210> 341  
<211> 570  
<212> DNA  
<213> Trifolium repens

<220>  
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<223> n is a, c, g, or t

<220>  
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<222> (20)..(20)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (570)..(570)  
<223> n is a, c, g, or t

<400> 341  
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accgacgaat ccaagctgca cgacgctgca cggaaccggt tagccaccct ctacagctcac 120  
ttgcttcctt cctccacaac ctccgccgcg ctcttccatc ctattcacct ttcttcttcc 180  
tccgggatct cccaccgctc taatgtcaaa ggaacactca ccgttggtga tgaacgtacc 240  
gggaagaagt ataccattga ggtctctcct gatggcaccg ttaaagccaa tgatttcaag 300  
aagatatcga ctgggaagaa tgataaggga ctcaaacttt atgaccttg atattttaa 360  
actgctcctg tgcgatcaac aatttcttat attgatggtg atgagggaaat ccttagatat 420  
agaggatacc ccattgagga gttggccgag aaaagcacct ttccggaagt ggcataatctc 480  
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cagcattcag ccttacctca aggagttttn 570

<210> 342  
<211> 592  
<212> DNA  
<213> Trifolium repens

<220>  
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<222> (2)..(2)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (17)..(17)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (591)..(592)  
<223> n is a, c, g, or t

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cgaatccaag ctgcacgacg ctgcacggaa ccgtttggct accctctcag ctacttgct 120  
tccttctctc acaaaactccg ctgcgcttct ccacctctatc cacctttctt cttcctctgg 180  
gatctcccca ccgtctaattg tcaaaggaac actcaccggt gttgatgaac gtaccgggaa 240  
gaagtatacc attgagggtct ctctgatgg caccgttaaa gccaatgatt tcaagaagat 300

atcaactggg aagaatgata aggggctcaa actttatgat cctggatatt taaacactgc	360
tcctgtgcga tcaacaattt cttatattga tggatgatgag ggaatcctta gatatagagg	420
atacccatt gaagagttgg ccgagaaaag cacctttccg gaagtggcat atctcatatt	480
gtatggaaat ttgccttctg caaatcagtt acaagaatgg gaatttgcta tatctcagca	540
ttcagcctta cctcaaggag ttttgatct catacaatca atgcctcaag nn	592

<210> 343  
 <211> 579  
 <212> DNA  
 <213> *Trifolium repens*

<220>  
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 <223> n is a, c, g, or t

<220>  
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 <223> n is a, c, g, or t

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gcattcagct gttccagaag gagttttgga tatcatacaa tcaatgcctc atgatgcaca	180
tcctatgggt gtcctagtga atgcaataag cgctctttct gtttttcatc ctgacgccaa	240
tcctgctctt agaggcttg atatttacga ctcaaaggaa gtgagagaca aacaaatagc	300
acggattatt ggaaagatta taacaattgc tgctgcagtt tatcttagaa tggcaggaag	360
gccacctgtg cttccatcca accaactatc ttacactgag aacttcctat acatgcttga	420
ttctttaggc aatcgggtcat ataaacccaa ccctcagcta actcgtgcac tagacattat	480
cttcacctg catgcagaac atgaaatgaa ttgctctaca tctgctgtcc gacaccttgc	540
atcaagcggc gttgatgtat atactgctat tgctggggn	579

<210> 344  
 <211> 594  
 <212> DNA  
 <213> *Trifolium repens*

<220>  
 <221> misc\_feature  
 <222> (593)..(594)  
 <223> n is a, c, g, or t

<400> 344	
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aatcaatgcc tcaagatgca catcctatgg gcgtgcttgt taatgctcta agtgctttgt	120
ctgtttttca tcctgatgca aatcctgctc tcagaggtct tgacatctac aactcaaagc	180
aagtgagaga caaacaata gtgcgatta ttggaaagat aacaacaatt gctgctgcga	240
ttaatcttag attgggagga aggccacctg ttcttccatc caacaaactt tcttacacag	300
agaacttcct ttacatgctt gattctcttg gcaatcggtc atataaacct aatcctcgtc	360
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catctgctgt acgccacctt gcatcaagtg gtgtcgaagt atacactgct attgctggag	480
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 <212> DNA  
 <213> *Trifolium repens*

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accattcatt cccagagggtc gagatggcag catcagcagc agctactttt actattggaa	180
ctgcccacaaac agggaggcca cttcctcaat caaacctttt tggtttgaaa gtcaattccc	240
aggttaattt taagaccttc tctggtctca aggccatgtc atctctaaga tgcgagtctg	300
aatcatcttt ctttggaac gaaactagt ctgctctgcg tgcaactttt gcacccaaag	360
ctcaaaaagga aaacccaaac atcaaccgca atttgcattc tcaggcatcc tacaaagtgg	420
cggttcttgg tgctgcagga ggaattggc agccactggc acttctcatt aagatgtcgc	480
ctttggtttc cgacctgcat ctttatgata tcgcgaatgt taaggaggtt gctgctgata	540
tcagtcattg caacactcct tcaaagggtt tggatttcac aggtgcttct gatttggcaa	600
attgtttgaa aggtgtggat gtagttgta tacctgctgg tgttcccaga aaacctggca	660
tgactcgtga tgacctttt aacatcaatg ccggtatagt cagggacttg gtcaccgctg	720
ttgcagataa ttgccctggt gcttttattc atgttatcag taaccgggtg aactctacag	780
ttcctattgc tgctgaaatt ctgaaacaaa aggggtgtta tgatcctaaa aagctctttg	840
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tcaggattca aaatgctgga actgaagttg ttgaggccaa ggctgggtgca gggctctgcta	1080
ctttgtcaat ggcctatgca gcagctagat ttgttgaatc atctcttcgt gcgcttgacg	1140
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 tagcatcatt tactgcttcc agaacttatg atttaaattt tccatagtat catttctact 1560  
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 <211> 408  
 <212> PRT  
 <213> Trifolium repens

<400> 346

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 20 25 30

Gln Val Asn Phe Lys Thr Phe Ser Gly Leu Lys Ala Met Ser Ser Leu  
 35 40 45

Arg Cys Glu Ser Glu Ser Ser Phe Phe Gly Asn Glu Thr Ser Ala Ala  
 50 55 60

Leu Arg Ala Thr Phe Ala Pro Lys Ala Gln Lys Glu Asn Gln Asn Ile  
 65 70 75 80

Asn Arg Asn Leu His Pro Gln Ala Ser Tyr Lys Val Ala Val Leu Gly  
 85 90 95

Ala Ala Gly Gly Ile Gly Gln Pro Leu Ala Leu Leu Ile Lys Met Ser  
 100 105 110

Pro Leu Val Ser Asp Leu His Leu Tyr Asp Ile Ala Asn Val Lys Gly  
 115 120 125

Val Ala Ala Asp Ile Ser His Cys Asn Thr Pro Ser Lys Val Leu Asp  
 130 135 140

Phe Thr Gly Ala Ser Glu Leu Ala Asn Cys Leu Lys Gly Val Asp Val

145                      150                      155                      160  
 Val Val Ile Pro Ala Gly Val Pro Arg Lys Pro Gly Met Thr Arg Asp  
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 Val Ala Asp Asn Cys Pro Gly Ala Phe Ile His Val Ile Ser Asn Pro  
                                  195                      200                      205  
 Val Asn Ser Thr Val Pro Ile Ala Ala Glu Ile Leu Lys Gln Lys Gly  
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 Val Tyr Asp Pro Lys Lys Leu Phe Gly Val Thr Thr Leu Asp Val Val  
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 Arg Ala Asn Thr Phe Val Ala Gln Lys Lys Asn Leu Arg Leu Ile Asp  
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 Val Asp Val Pro Val Val Gly Gly His Ala Gly Ile Thr Ile Leu Pro  
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                                  275                      280                      285  
 Glu Ala Leu Thr Val Arg Ile Gln Asn Ala Gly Thr Glu Val Val Glu  
                                  290                      295                      300  
 Ala Lys Ala Gly Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala Ala  
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 Ala Arg Phe Val Glu Ser Ser Leu Arg Ala Leu Asp Gly Asp Ala Asp  
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 Val Tyr Glu Cys Ser Phe Val Gln Ser Asp Leu Thr Asp Leu Pro Phe  
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 Phe Ala Ser Arg Val Lys Ile Gly Arg Lys Gly Val Glu Ala Leu Ile  
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 Pro Thr Asp Leu Gln Gly Leu Ser Glu Tyr Glu Gln Lys Ala Leu Glu  
                                  370                      375                      380  
 Ala Leu Lys Pro Glu Leu Lys Ala Ser Ile Glu Lys Gly Ile Ala Phe  
                                  385                      390                      395                      400  
 Ala Gln Lys Gln Thr Val Ser Ala

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 <211> 3372  
 <212> DNA  
 <213> *Trifolium repens*

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 acacgggtga gaaggagtga attgctccaa tggcaacaaa caaatggaa aaaatggcat 180  
 caattgatgc acagcttaga caattagtag cagcaaaaagt tagtgaagat gataaactta 240  
 ttgagtatga tgctttgttg ttggatcggg ttcttgatat ccttcaggat ttacatggag 300  
 aggatctgaa agattctggt caagaagtgt atgaactttc tgcggagtat gaaagaaagc 360  
 atgaccta gaaacttgaa gagctcggaa atttgataac aagtttagat gcaggagatt 420  
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 aatctcctca ggaagttttt gatgcgttga agaaccagac cgttgatttg gttcttactg 660  
 ctcaccta tcatcgtggt cgtaggtcgt tgcttcaaaa gcatggaagg gtaaggaact 720  
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 caccacaaga tgagatgaga gcagggatga gttacttcca cgaaacaatt tggaagggtg 900  
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cggctgatga	acttgtaaca	ttgaatccaa	caagtgaata	tgctcctggt	ttggaagaca	3000
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cctttttcat	aagaaactca	catcagggtt	tgttgatggt	tttccttact	ttgttaccat	3240
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<210> 348  
 <211> 967  
 <212> PRT  
 <213> Trifolium repens

<400> 348

Met Ala Thr Asn Lys Met Glu Lys Met Ala Ser Ile Asp Ala Gln Leu  
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Arg Gln Leu Val Pro Ala Lys Val Ser Glu Asp Asp Lys Leu Ile Glu  
20 25 30

Tyr Asp Ala Leu Leu Leu Asp Arg Phe Leu Asp Ile Leu Gln Asp Leu  
35 40 45

His Gly Glu Asp Leu Lys Asp Ser Val Gln Glu Val Tyr Glu Leu Ser  
50 55 60

Ala Glu Tyr Glu Arg Lys His Asp Pro Lys Lys Leu Glu Glu Leu Gly  
65 70 75 80

Asn Leu Ile Thr Ser Leu Asp Ala Gly Asp Ser Ile Val Val Ala Lys  
85 90 95

Ser Phe Ser His Met Leu Asn Leu Ala Asn Leu Ala Glu Glu Val Gln  
100 105 110

Ile Ala His Arg Arg Arg Asn Lys Leu Lys Lys Gly Asp Phe Arg Asp  
115 120 125

Glu Ser Asn Ala Thr Thr Glu Ser Asp Ile Glu Glu Thr Leu Lys Arg  
130 135 140

Leu Val Phe Asn Met Lys Lys Ser Pro Gln Glu Val Phe Asp Ala Leu  
145 150 155 160

Lys Asn Gln Thr Val Asp Leu Val Leu Thr Ala His Pro Thr Gln Ser  
165 170 175

Val Arg Arg Ser Leu Leu Gln Lys His Gly Arg Val Arg Asn Cys Leu  
180 185 190

Ser Gln Leu Tyr Ala Lys Asp Ile Thr Pro Asp Asp Lys Gln Glu Leu  
195 200 205

Asp Glu Ala Leu Gln Arg Glu Ile Gln Ala Ala Phe Arg Thr Asp Glu  
210 215 220

Ile Lys Arg Thr Pro Pro Thr Pro Gln Asp Glu Met Arg Ala Gly Met  
225 230 235 240

Ser Tyr Phe His Glu Thr Ile Trp Lys Gly Val Pro Lys Phe Leu Arg  
Page 322

					245					250					255	
Arg	Val	Asp	Thr 260	Ala	Leu	Lys	Asn	Ile 265	Gly	Ile	Asn	Glu	Arg 270	Val	Pro	
Tyr	Asn	Ala 275	Pro	Leu	Ile	Gln	Phe 280	Ser	Ser	Trp	Met	Gly 285	Gly	Asp	Arg	
Asp	Gly 290	Asn	Pro	Arg	Val	Thr 295	Pro	Glu	Val	Thr	Arg 300	Asp	Val	Cys	Leu	
Leu 305	Ala	Arg	Met	Met	Ala 310	Ala	Asn	Leu	Tyr	Tyr 315	Ser	Gln	Ile	Glu	Asp 320	
Leu	Met	Phe	Glu	Leu 325	Ser	Met	Trp	Arg	Cys 330	Asn	Asp	Glu	Leu	Arg 335	Asp	
Arg	Ala	Glu	Glu 340	Leu	His	Arg	Asn	Ser 345	Lys	Lys	Asp	Glu	Val 350	Ala	Lys	
His	Tyr	Ile 355	Glu	Phe	Trp	Lys	Lys 360	Ile	Pro	Leu	Asn	Glu 365	Pro	Tyr	Arg	
Val	Ile 370	Leu	Gly	Asp	Val	Arg 375	Asp	Lys	Leu	Tyr	Arg 380	Thr	Arg	Glu	Arg	
Ser 385	Arg	Tyr	Leu	Leu	Ala 390	His	Gly	Tyr	Ser	Glu 395	Ile	Pro	Glu	Glu	Ala 400	
Thr	Phe	Thr	Asn	Val 405	Asp	Glu	Phe	Leu	Glu 410	Pro	Leu	Glu	Leu	Cys 415	Tyr	
Arg	Ser	Leu	Cys 420	Ala	Cys	Gly	Asp	Arg 425	Ala	Val	Ala	Asp	Gly 430	Ser	Leu	
Leu	Asp	Phe 435	Leu	Arg	Gln	Val	Ser 440	Thr	Phe	Gly	Leu	Ser 445	Leu	Val	Arg	
Leu	Asp 450	Ile	Arg	Gln	Glu	Ser 455	Asp	Arg	His	Thr	Asp 460	Val	Met	Asp	Ala	
Ile 465	Thr	Lys	His	Leu	Glu 470	Ile	Gly	Ser	Tyr	Gln 475	Asp	Trp	Ser	Glu	Glu 480	
Lys	Arg	Gln	Glu	Trp 485	Leu	Leu	Ser	Glu	Leu 490	Val	Gly	Lys	Arg	Pro 495	Leu	
Phe	Gly	Pro	Asp	Leu	Pro	Gln	Thr	Asp	Glu	Ile	Arg	Glu	Val	Leu	Glu	

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Thr	Phe	His	Val	Ile	Ala	Glu	Leu	Pro	Ser	Asp	Asn	Phe	Gly	Ala	Tyr
		515					520					525			
Ile	Ile	Ser	Met	Ala	Thr	Ala	Pro	Ser	Asp	Val	Leu	Ala	Val	Glu	Leu
	530					535					540				
Leu	Gln	Arg	Glu	Cys	Lys	Ile	Lys	Asn	Pro	Leu	Arg	Val	Val	Pro	Leu
545					550					555					560
Phe	Glu	Lys	Leu	Ala	Asp	Leu	Glu	Ser	Ala	Pro	Ala	Ala	Leu	Ala	Arg
				565					570					575	
Leu	Phe	Ser	Ile	Asp	Trp	Tyr	Ile	Asn	Arg	Ile	Asp	Gly	Lys	Gln	Glu
			580					585					590		
Val	Met	Ile	Gly	Tyr	Ser	Asp	Ser	Gly	Lys	Asp	Ala	Gly	Arg	Phe	Ser
		595					600					605			
Ala	Ala	Trp	Gln	Leu	Tyr	Lys	Ala	Gln	Glu	Asp	Leu	Ile	Asn	Val	Ala
	610					615					620				
Gln	Lys	Tyr	Gly	Val	Lys	Leu	Thr	Met	Phe	His	Gly	Arg	Gly	Gly	Thr
625					630					635					640
Val	Gly	Arg	Gly	Gly	Gly	Pro	Thr	His	Leu	Ala	Ile	Leu	Ser	Gln	Pro
			645						650					655	
Pro	Asp	Thr	Ile	His	Gly	Ser	Leu	Arg	Val	Thr	Val	Gln	Gly	Glu	Val
			660					665					670		
Ile	Glu	Gln	Ser	Phe	Gly	Glu	Glu	His	Leu	Cys	Phe	Arg	Thr	Leu	Gln
		675					680					685			
Arg	Phe	Thr	Ala	Ala	Thr	Leu	Glu	His	Gly	Met	Arg	Pro	Pro	Ser	Ser
	690					695					700				
Pro	Lys	Pro	Glu	Trp	Arg	Glu	Leu	Met	Asp	Gln	Met	Ala	Val	Ile	Ala
705					710					715					720
Thr	Glu	Glu	Tyr	Arg	Ser	Ile	Val	Phe	Lys	Glu	Pro	Arg	Phe	Val	Glu
				725					730					735	
Tyr	Phe	Arg	Leu	Ala	Thr	Pro	Glu	Met	Glu	Tyr	Gly	Arg	Met	Asn	Ile
			740					745					750		
Gly	Ser	Arg	Pro	Ala	Lys	Arg	Arg	Pro	Cys	Gly	Gly	Ile	Glu	Thr	Leu



755                      760                      765  
 Arg Ala Ile Pro Trp Ile Phe Ala Trp Thr Gln Thr Arg Phe His Leu  
 770                      775                      780  
 Pro Val Trp Leu Gly Phe Gly Ala Ala Phe Lys Gln Val Ile Ala Lys  
 785                      790                      795                      800  
 Asp Val Lys Asn Leu His Met Leu Gln Glu Met Tyr Asn Gln Trp Pro  
 805                      810                      815  
 Phe Phe Arg Val Thr Ile Asp Leu Val Glu Met Val Phe Ala Lys Gly  
 820                      825                      830  
 Asp Pro Gly Ile Ala Ala Leu Asn Asp Arg Leu Leu Val Ser Gln Asp  
 835                      840                      845  
 Leu Trp Pro Phe Gly Glu Gln Leu Arg Ser Lys Tyr Glu Glu Thr Lys  
 850                      855                      860  
 Lys Leu Leu Leu Gln Val Ala Thr His Lys Glu Val Leu Glu Gly Asp  
 865                      870                      875                      880  
 Pro Tyr Leu Lys Gln Arg Leu Arg Leu Arg Asp Ser Tyr Ile Thr Thr  
 885                      890                      895  
 Leu Asn Val Phe Gln Ala Tyr Thr Leu Lys Arg Ile Arg Asp Pro Asn  
 900                      905                      910  
 Tyr Lys Val Glu Val Arg Pro Arg Val Ser Lys Glu Ser Ala Glu Thr  
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 Ser Lys Ser Ala Asp Glu Leu Val Thr Leu Asn Pro Thr Ser Glu Tyr  
 930                      935                      940  
 Ala Pro Gly Leu Glu Asp Thr Leu Ile Leu Thr Met Lys Gly Ile Ala  
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 Ala Gly Met Gln Asn Thr Gly  
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 <213> Trifolium repens

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tggttgtaac	tctaaacatt	tggtgcaatt	gcaatgagaa	atattttgcc	caaatacccc	1740
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taggtcccaa	gggagcatca	gaataaaggc	attatgtttt	gggggtaatc	cctctgtatt	1920
ctttctaaat	aggattgacc	cctttgacaa	aaaatacaaa	ttatcaatat	cactcgtcta	1980
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2066

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<211> 472  
<212> PRT  
<213> Trifolium repens

<400> 350

Met Ala Phe Phe Arg Ser Val Ser Ala Leu Ser Lys Leu Arg Ser Arg  
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Val Gly Gln Gln Pro Ser Leu Ala Asn Ser Val Arg Trp Leu Gln Thr  
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Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val  
35 40 45

Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser  
50 55 60

Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg  
65 70 75 80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu  
85 90 95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu  
100 105 110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp  
115 120 125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu  
130 135 140

Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys  
145 150 155 160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser  
165 170 175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr  
180 185 190

Glu Gly Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp  
195 200 205

Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr  
Page 327

210	215	220
Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu	225 230 235 240	
Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu	245 250 255	
Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu	260 265 270	
Gly Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu	275 280 285	
Ser Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly	290 295 300	
Pro Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn	305 310 315 320	
Ile Val Lys Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser	325 330 335	
Asp Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr	340 345 350	
Gly His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg	355 360 365	
Glu Phe Ala Leu Lys His Leu Pro Asn Asp Pro Leu Phe Gln Leu Val	370 375 380	
Ser Lys Ile Lys Glu Val Val Pro Pro Ile Leu Thr Lys Leu Gly Lys	385 390 395 400	
Val Lys Asn Pro Trp Pro Asn Val Asp Ala His Ser Gly Val Leu Leu	405 410 415	
Asn Tyr Tyr Gly Leu Thr Glu Glu Asn Tyr Tyr Thr Val Leu Phe Gly	420 425 430	
Val Ala Arg Ser Ile Gly Val Gly Pro Gln Leu Ile Trp Asp Arg Ala	435 440 445	
Leu Gly Met Pro Leu Glu Arg Pro Lys Ser Val Thr Leu Glu Lys Leu	450 455 460	
Glu Lys Leu Val Gly Ala Ser Ser		

465

470

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 aattcttttg gatccgaat cattcattct acgcttcttc tctcttctct gcgtttcaaa 180  
 ccctagttgt tttgttgatt gatcttaatg gcgttctttc gaagcgtttc tgcgctttca 240  
 aaactacgat ctctgtgtgg tcaacaacct agtcttgcta attcagttag atggctccaa 300  
 actccaagct ccagtaacac tgatctttat tctgagatga aggagctagt tccagagtat 360  
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 gcaaaaatcc cagagtatgc ttacaaggca attgatgcac tgcctgtttc tgctcatcca 720  
 atgacacaat ttagtactgg tgtaatggcc ctccaggtgg agagtgaagt taaaaaggca 780  
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 aaaatcatac cattggatga ttctttggat tatggtgcaa actatgctca catgttagga 960  
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 gaaggtggca acgttagttc tcacacagct cacctagttg ctagtctact atcagatcct 1080  
 tatcttgcac tcgcagctgc tctgaatggg ttagctggcc cactgcatgg tttagccaat 1140  
 caggaagttc tacgatggat cagaaacata gttaaggagt ttggaactcc aaacataagt 1200  
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 ggtgtcgcga ggagtattgg agttggccct cagctgatat gggaccgtgc tcttggaatg 1560  
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 ctttctaaat aggattgacc cttttgacaa aaaatacaaa ttatcaatat cactcgtcta 1980  
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 <211> 472  
 <212> PRT  
 <213> *Trifolium repens*

<400> 352

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Val Gly Gln Gln Pro Ser Leu Ala Asn Ser Val Arg Trp Leu Gln Thr  
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Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val  
 35 40 45

Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser  
 50 55 60

Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg  
 65 70 75 80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu  
 85 90 95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu  
 100 105 110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp  
 115 120 125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu  
 130 135 140

Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys  
 145 150 155 160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser  
 Page 330

165								170					175				
Thr	Gly	Val	Met 180	Ala	Leu	Gln	Val	Glu 185	Ser	Glu	Phe	Thr	Lys 190	Ala	Tyr		
Glu	Gly	Gly 195	Ile	His	Lys	Ser	Arg 200	Tyr	Trp	Glu	Pro	Thr 205	Tyr	Glu	Asp		
Ser	Leu 210	Asn	Leu	Ile	Ala	Arg 215	Leu	Pro	Gly	Ile	Ala 220	Ala	Tyr	Ile	Tyr		
Arg 225	Arg	Ile	Tyr	Lys	Asp 230	Gly	Lys	Ile	Ile	Pro 235	Leu	Asp	Asp	Ser	Leu 240		
Asp	Tyr	Gly	Ala	Asn 245	Tyr	Ala	His	Met	Leu 250	Gly	Phe	Asp	Asp	Pro 255	Glu		
Thr	Leu	Glu	Phe 260	Met	Arg	Leu	Tyr	Ile 265	Ser	Ile	His	Ser	Asp 270	His	Glu		
Gly	Gly	Asn 275	Val	Ser	Ser	His	Thr 280	Ala	His	Leu	Val	Ala 285	Ser	Ser	Leu		
Ser	Asp 290	Pro	Tyr	Leu	Ala	Phe 295	Ala	Ala	Ala	Leu	Asn 300	Gly	Leu	Ala	Gly		
Pro 305	Leu	His	Gly	Leu	Ala 310	Asn	Gln	Glu	Val	Leu 315	Arg	Trp	Ile	Arg	Asn 320		
Ile	Val	Lys	Glu	Phe 325	Gly	Thr	Pro	Asn	Ile 330	Ser	Thr	Glu	Gln	Leu 335	Ser		
Asp	Tyr	Ile	His 340	Lys	Thr	Leu	Asn	Ser 345	Gly	Gln	Val	Val	Pro 350	Gly	Tyr		
Gly	His	Gly 355	Val	Leu	Arg	Asn	Thr 360	Asp	Pro	Arg	Tyr	Thr 365	Cys	Gln	Arg		
Glu	Phe 370	Ala	Leu	Lys	His	Leu 375	Pro	Asn	Asp	Pro	Leu 380	Phe	Gln	Leu	Val		
Ser 385	Lys	Ile	Lys	Glu	Val 390	Val	Pro	Pro	Ile	Leu 395	Thr	Lys	Leu	Gly	Lys 400		
Val	Lys	Asn	Pro	Trp 405	Pro	Asn	Val	Asp	Ala 410	His	Ser	Gly	Val	Leu 415	Leu		
Asn	Tyr	Tyr	Gly	Leu	Thr	Glu	Glu	Asn	Tyr	Tyr	Thr	Val	Leu	Phe	Gly		

420

425

430

Val Ala Arg Ser Ile Gly Val Gly Pro Gln Leu Ile Trp Asp Arg Ala  
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Glu Lys Leu Val Gly Ala Ser Ser  
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 cataaattag gtcccaaggg agcatcagaa taaaggcatt atgttttggg ggtaatcccc 1800  
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 ccactgctta atcactagt aattc 1885

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 <212> PRT  
 <213> *Trifolium repens*

<400> 354

Met Ala Phe Phe Arg Ser Val Ser Ala Leu Ser Lys Leu Arg Ser Arg  
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Val Gly Gln Gln Pro Ser Leu Ala Asn Ser Val Arg Trp Leu Gln Thr  
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Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val  
 35 40 45

Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser  
 50 55 60

Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg  
 65 70 75 80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu  
 85 90 95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu  
 100 105 110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp  
 115 120 125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu  
 130 135 140

Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys  
145 150 155 160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser  
165 170 175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr  
180 185 190

Glu Ser Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp  
195 200 205

Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr  
210 215 220

Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu  
225 230 235 240

Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu  
245 250 255

Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu  
260 265 270

Gly Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu  
275 280 285

Ser Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly  
290 295 300

Pro Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn  
305 310 315 320

Ile Val Thr Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser  
325 330 335

Asp Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr  
340 345 350

Gly His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg  
355 360 365

Glu Phe Ala Leu Lys His Leu Pro Asn Asp Pro Leu Phe Gln Leu Val  
370 375 380

Ser Lys Ile Lys Glu Val Val Pro Pro Ile Leu Thr Lys Leu Gly Lys  
385 390 395 400

Val Lys Asn Pro Trp Pro Asn Val Asp Ala His Ser Gly Val Leu Leu  
405 410 415

Asn Tyr Tyr Gly Leu Thr Glu Glu Asn Tyr Tyr Thr Val Leu Phe Gly  
420 425 430

Val Ala Arg Ser Ile Gly Val Gly Pro Gln Leu Ile Trp Asp Arg Ala  
435 440 445

Leu Gly Met Pro Leu Glu Arg Pro Lys Ser Val Thr Leu Glu Lys Leu  
450 455 460

Glu Lys Leu Val Gly Ala Ser Ser  
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<210> 357  
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ccatggccta atgttgatgc 20

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<210> 371  
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<210> 374  
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<220>  
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<400> 375  
gccagcagca atacccttca tgg 23

<210> 376  
<211> 18  
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<400> 376  
ttgcttctca actgttcc 18

<210> 377  
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 <220>  
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 <220>  
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 <210> 385  
 <211> 50  
 <212> DNA



<213> Artificial  
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 <400> 385  
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 <211> 53  
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 <210> 389  
 <211> 32  
 <212> DNA  
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 <220>  
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 aatagcggcc gcgatttagt actggatttt gg 32  
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<210> 391  
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